Appendices to the Draft Environmental Impact Report for the

Riverside Community Hospital Expansion Project

FEBRUARY 2014

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APPENDIX A

Initial Study, Notice of Preparation, Notice of Preparation Comment Letters, and Community Planning Commission Workshop Minutes

Initial Study

INITIAL STUDY
for the
Proposed Riverside Community Hospital Expansion Project Specific Plan and Environmental Impact Report in the City of Riverside

Prepared for:

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1.0 INTRODUCTION

1.1 California Environmental Quality Act Compliance

This document serves as the Initial Study for the proposed Riverside Community Hospital (RCH) Expansion Project (proposed project) Specific Plan (SP) and Environmental Impact Report (EIR) in the City of Riverside (City), California. The City, through its Community Development Department, Planning Division (Department), is the lead agency responsible for the review and approval of the proposed project.

This Initial Study has been prepared by Dudek on behalf of the Department and is in conformance with Sections 15063 and 15064 of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et. seq). The purpose of the Initial Study Checklist/Environmental Evaluation is to identify any potentially significant impacts associated with the proposed project and to document the forthcoming intended analysis in an EIR.

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2.0 PROJECT DESCRIPTION

2.1 Project Location

The approximately 22.5-acre project site is located at 4445 Magnolia Avenue in Riverside, California, approximately 0.42 mile west of State Route 91 (SR 91) and approximately 1.60 miles south of SR 60. The site is bounded by 14th Street to the north, Brockton Avenue to the west, and Magnolia Avenue to the east. Evans Park, Tequesquite Avenue, and residential development are located to the south (Figure 1, Regional Map; Figure 2, Vicinity Map; Figure 3, Site Plan).

The uses adjacent to the proposed Riverside Community Hospital (RCH) Expansion Project (proposed project) site are residences to the northwest; Grant Elementary School and a gas station to the north; muffler services to the northeast; Newman Park and Community Medical Group of Riverside to the east; Riverside City College to the southeast; Calvary Presbyterian Church, Evans Park, and residences to the south; and commercial and industrial uses to the west.

RCH consists of 12 Assessor's Parcel Numbers (217-070-027, 217-300-009, 217-300-018, 217-300-019, 217-060-024, 217-060-026, 217-060-027, 217-060-028, 217-300-011, 217-300-014, 217-300-015, and 217-111-048). The latitude and longitude of the approximate center of the site is 33°58'35" N and 117°22'53" W. The RCH site includes parts of Section 23 of Township 2 South, Range 5 West within the Riverside West 7.5-minute quadrangle, as mapped by the U.S. Geological Survey.

2.2 Project Background

Since 1901, RCH has been, and will continue to be, a prominent provider of healthcare in the Riverside community and the Inland Empire region, providing comprehensive healthcare and highly specialized services. RCH opened on the site in March 1925 after purchasing a 5-acre parcel and constructed a single-story, 85-bed hospital (see Building A on Figure 3, Site Plan). A six-story patient care tower was added in 1965 under a Conditional Use Permit, which grew the hospital to 325 beds (see Building B on Figure 3). Other hospital-related facilities, including medical office buildings, health education center, women's services building, storage building, parking structures, HeartCare Institute, and emergency and surgical services, were developed between 1958 and 2002. RCH is owned and operated by an affiliate of Hospital Corporation of America. It is currently equipped with 373 beds and has approximately 1,630 employees, including over 500 highly trained physicians representing over 200 specialties. RCH houses the largest Emergency Room and Trauma Center in the Inland Empire, at 50 beds. RCH is one of Riverside County's only ST-elevation myocardial infarction (STEMI; severe heart attack) receiving centers and is a fully accredited Chest Pain Center. Centers of Excellence include the HeartCare Institute, offering invasive and non-invasive cardiac procedures, the Transplant Program, and a Level II Neonatal Intensive Care Unit (ICU).

2.3 Previous Approvals/History of Project Changes

RCH currently operates under a Conditional Use Permit that dates back to the 1960s and is consistent with the Downtown Specific Plan–Health Care District. Under the Downtown Specific Plan–Health Care District, hospitals are permitted with a Conditional Use Permit. Current RCH campus buildings, including years constructed, are listed in Table 1 and depicted on Figure 3, Site Plan.

Table 1
Existing Riverside Community Hospital Uses on Site

ID on Figure 3	Building/Structure	Use	Square Footage	Number of Beds	Year Constructed
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925
B	Building B	Hospital	176,040	273	1965
C	Building C	Hospital – ICU and med/surg	111,450	34	1987
D	Building D	Hospital	41,431	66	1958
E	Building E	Hospital	3,565	N/A	1954
F	Building F	Hospital	1,077	N/A	1996
G	Parking structure and helipad	Parking	59,500	N/A	2002
H	Health education center	Meeting rooms	12,543	N/A	1979
I	Parking structure	Parking	96,084	N/A	1982
J	Parking structure	Parking	101,049	N/A	1986
K	Medical office building 2	Cancer center	65,503	N/A	1986
L	Brockton Storage Building	Storage	4,450	N/A	1958
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981
N	Medical office building1	Medical offices	61,135	N/A	1975
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996
		Total Square Footage	852,186		

Source: Kimley-Horn and Associates Inc. 2013.
N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical

2.4 Need for Project

The primary reason for the proposed expansion of RCH is to build new facilities to alleviate noncompliant seismic concerns associated with existing hospital buildings and meet seismic retrofit requirements as required by Senate Bill (SB) 1953. As it exists today, Building A will not be allowed to house acute care services beyond January 1, 2020. Those services will need to be relocated into the proposed Phase I tower. Per SB 1953, Buildings B and D will not be allowed to house acute care services beyond January 1, 2030. In addition to meeting the requirements of

SB 1953, the overall hospital expansion is needed to improve access to healthcare for a growing population as well as to modernize hospital facilities. In the event of a disaster, RCH would be the primary hospital that would serve the community of Riverside.

The existing hospital is operating under a 1960s Conditional Use Permit. Any future development and expansion would likewise require approval from the City of Riverside (City). The proposed Specific Plan (SP) will make future development more streamlined in that it will supersede existing entitlements, outline existing uses and future uses, and lay out a cohesive set of guidelines that will provide City staff, RCH, and the public with a clear understanding of how growth and development will occur at the site. The use of the SP will allow City staff to expedite the entitlement processes for future development.

2.5 Project Objectives

RCH proposes the redevelopment and expansion of its existing hospital campus facilities (see Section 2.6).

The overall project goal is to provide a comprehensive specific plan that will include a roadmap to guide future expansion plans on the RCH campus and clearly define the extent and location of future development on the RCH campus. The SP will identify design and development requirements for the medical service facilities and supporting uses on the RCH campus to facilitate a cohesive and efficient orientation for the public, employees, and customers of RCH. The SP will also allow for an expedited entitlement process for future development on the RCH campus.

The SP objectives (project objectives) are as follows:

- Demolish, rehabilitate, and construct new structures within the RCH campus in order to comply with the mandated requirements of SB 1953, the Alfred E. Alquist Seismic Act, to replace unsafe applicable hospital facilities by the year 2030.
- In order to meet the requirements of Nonstructural Performance Category 5 by 2030, construct facilities that provide a self-sustaining hospital that would provide water and wastewater holding tanks sufficient for 72 hours in the event of a disaster.
- Develop a comprehensively planned, integrated medical campus within the existing hospital campus boundaries that includes an approximately 600-hospital-bed buildout capacity, with acute care services, medical offices, and ancillary services for the community and new employment opportunities in downtown Riverside.
- Increase hospital operational efficiencies by providing a variety of services, such as cancer care, ER/trauma, imaging, neurology and neurosurgery, a center for surgical weight loss, transplant programs, labs, and medical office space in a central campus-like setting.

- Provide space for research and medical education facilities in cooperation with the Medical School at University of California, Riverside.
- Provide a roadmap to guide future development plans on the campus by providing design and development standards to be implemented by future streamlined entitlement processes for future campus expansions.

2.6 Project Characteristics

2.6.1 California Environmental Quality Act Baseline

The RCH campus currently occupies approximately 852,186 square feet of development. Figure 3, Site Plan, depicts existing structures, existing structures to be demolished, and previously approved structures to be built. For purposes of analysis in the SP/Environmental Impact Report (EIR), any approved ongoing development currently under construction or commencing construction within approximately 12 months of the release of the Notice of Preparation is considered part of the existing development/approvals baseline. The following subsections describe ongoing development currently under construction.

New Parking Structure

A new, five-level, 385,500-square-foot, 1,060-parking-space structure was approved under Planning Case P12-0643 by the City on February 5, 2013. A Notice of Exemption (Class 32/Section 15332 (In-Fill Development)) was filed with the Riverside County Clerk on February 7, 2013. The proposed parking structure involves the displacement of 283 surface parking spaces at the northeast corner of Brockton Avenue and Tequesquite Avenue. The parking structure is currently under construction and is anticipated to be completed by February 2014. It is anticipated that the proposed parking structure will provide sufficient parking at least through Phase IIb of the proposed project.

New Medical Office Building (Building P)

A new, three-story, 61,000-square-foot medical office building was approved under Design Review Planning Case P12-0779 on May 10, 2013. A Notice of Exemption (Class 32/Section 15332 (In-Fill Development, Section 15061(b)(3)) was filed with the Riverside County Clerk on May 15, 2013. The proposed medical office building involves the displacement of 112 existing surface parking spaces at the northeast corner of Brockton Avenue and Tequesquite Avenue (identified as Building P on Figure 3, Site Plan). The purpose of constructing the new medical office building is to provide a medical office that would meet the current seismic requirements of SB 1953 and to replace the existing Building N medical office building 1 which is proposed for demolition as part of this Project. Building N is proposed for demolition to accommodate the new hospital bed tower in Phase I of the proposed project. Building N was designed in 1975 by Clint Marr, who was considered a significant architect from Riverside's Modern era; therefore,

the proposed demolition of Building N would need to be analyzed in the forthcoming EIR and a cultural report is being prepared to analyze the historical significance of this building. The 148 physicians/staff currently working in Building N will transition to the new medical office building. There will be no net increase in number of physicians/staff. Building N will remain vacant until it is further analyzed as part of this SP/EIR as well as in the cultural report. The new medical office Building P is scheduled for completion in March 2014.

These structures are to be constructed over the next 12 months and are therefore included in the baseline scenario. Table 2 includes the existing RCH buildings/structures as well as the new parking structure and new medical office building (Building P), all to be considered as part of the baseline conditions that will be analyzed in the forthcoming SP/EIR.

2.6.2 Proposed Project

Construction Components and Phasing

RCH is proposing a new SP on the project site. A site master plan has been developed and includes both short-term and long-range planning goals that cover construction over a 30-year period. As previously mentioned, the primary focus of Phase I of the proposed project is to construct a new hospital bed tower to alleviate seismic concerns associated with existing buildings and to meet seismic retrofit requirements as required by SB 1953. Phase II of the proposed project also addresses seismic concerns and includes future and possible long-range development. Phase I and Phase II of the proposed project are described in this section.

Phase I – 2014 to 2017

Phase I of the SP will focus on a new, 251,500-square-foot, seven-story hospital bed tower addition that will house up to 105 new beds with 35 intensive care patient rooms and 70 medical and surgical patient rooms to accommodate families, as well as expanding its service offerings to more critically ill patients, a laboratory, and food services operations. This would bring the total bed count on the hospital campus to approximately 478. The hospital bed tower would also accommodate the relocation of acute care services such as dietary and laboratory services currently housed in Building A, which is not compliant with SB 1953. The hospital currently employs approximately 1,960 employees. 187 employees will relocate from Building A (119 laboratory employees and 68 dietary employees) to the new Phase I hospital tower and an additional 330 estimated employees would be needed to serve the new tower, totaling approximately 2,290 employees campus-wide. During Phase I, Building A would be used for hospital administrative support.

Table 2
Existing and Approved Riverside Community Hospital Uses on Site – Baseline Conditions

ID on Figure 3	Building/Structure	Use	Square Footage	Number of Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration servicdes	58,705	N/A	1925	No change
B	Building B	Hospital	176,040	273	1965	No change
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change
D	Building D	Hospital	41,431	66	1958	No change
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1996	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1982	No change
J	Parking structure	Parking	101,049	N/A	1986	No change
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change
N	Medical office building 1	Medical offices	61,135	N/A	1975	No change
O	Parking structure	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Under construction; anticipated construction completion February of 2014
P	Medical office building	Medical offices	61,000	N/A	Construction anticipated to be completed 2014	Under construction; anticipated construction completion March of 2014
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change
		Total Square Footage	1,298,686			

Source: Kimley-Horn and Associates Inc. 2013.
N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical

Construction of the new hospital bed tower for Phase I would eliminate 69 parking spaces (see Figure 3, Site Plan). The existing Building N medical office building 1 would be proposed for demolition under Phase I to accommodate the new hospital bed tower. Building N would already be vacant prior to demolition as the physicians/staff would be relocated to the new Building P (which will be completed in March 2014 under the baseline/existing conditions). Also included in Phase I, Building B is proposed for a full seismic upgrade, including new windows as a result of the retrofit. Table 3 lists the existing RCH buildings/structures with the addition of the Phase I components of the proposed project.

Table 3
Existing and Approved Riverside Community Hospital Uses on Site, and Phase I of the Proposed Project

ID on Figure 3	Building/ Structure	Use	Square Footage	Number of Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	Dietary/lab to move to the Phase I bed tower; Building A used for hospital administrative support
B	Building B	Hospital	176,040	273	1965	No change in footprint, but seismic upgrades needed
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change
D	Building D	Hospital	41,431	66	1958	No change in footprint, but seismic upgrades needed
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1996	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1982	No change
J	Parking structure	Parking	101,049	N/A	1986	No change
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change
N	Medical office building 1	Medical offices	61,135	N/A	1975	To be demolished as part of Phase I of the proposed project

Table 3
Existing and Approved Riverside Community Hospital Uses on Site, and Phase I of the Proposed Project

ID on Figure 3	Building/ Structure	Use	Square Footage	Number of Beds	Year Constructed	Action
O	Parking structure	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
P	Medical office building	Medical offices	61,000	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change
	New Phase I hospital bed tower	Hospital	251,500	189		Phase I of the proposed project
Total Square Footage*			1,489,051			

Source: Kimley-Horn and Associates Inc. 2013.
N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical
Note: *Building N is not calculated in the total square footage as it is being demolished as part of Phase I of the proposed project
Shaded rows represent changes from baseline conditions.

Phase II – 2017 to 2043

During Phase II of the proposed project, it is anticipated that several new structures would be constructed on the existing 22.5-acre hospital campus over a 30-year period. Phase II would be broken down into subphases – Phase IIa, Phase IIb, and Phase IIc.

Phase IIa – 2017 to 2024

Phase IIa would occur between 2017 and 2024 and would consist of the demolition of Building A since it is not in compliance with SB 1953 and can no longer house acute care services. An approximately 100,000-square-foot mixed-use building would be proposed on the Building A site. Also the buildout of the shell space (84 additional beds) in the Phase I tower would most likely occur during this phase (or earlier if necessary). When the tower has been built, the maximum bed capacity on campus would be 562 beds. Additional surface or structure parking is also anticipated to be needed in this Phase to support the new space.

Phase IIb – 2024 to 2029

Phase IIb would occur between 2024 and 2029 and would consist of a second new, estimated eight-story, 600,000+-square-foot replacement bed tower, totaling 339 beds (273 beds relocated from Building B and 66 beds relocated from Building D to the proposed replacement bed tower after the seismic upgrades are complete under Phase I). The relocation of 339 beds would keep the number of

beds on campus at 562. Phase IIb focuses on relocating beds and acute care services out of Building B and Building D to the new second tower, as those buildings are no longer in compliance with SB 1953. Once the beds are relocated to the new second hospital bed tower, Building B and Building D will be used for outpatient, skilled nursing, support, and education (e.g. University of California, Riverside Program Space). Phase IIb includes the existing parking structures (identified as I and J on Figure 3, Site Plan) to be demolished prior to the construction of the Phase IIb replacement bed tower. Some additional convenience parking could be included during this phase.

Phase IIc – 2030 to 2043

Phase IIc would occur between 2030 and 2043 and is expected to include the following:

- Addition of 38 beds, to take the campus-wide total to 600 beds. (This could occur in Phase IIb if need is demonstrated prior to 2030.)
- Construction of ancillary services as necessary.
- Construction of surface or structured parking as needed to support growth.

Long-range development as part of Phase IIc of the proposed project could include future acute care expansions, parking structures, or other ancillary uses including, but not limited to, the following:

- Acute care services
- Central utility plants
- Medical office buildings and clinics
- Outpatient services buildings
- Education centers
- Dental clinics
- Imaging centers
- Pharmacies
- Wellness centers
- Physical therapy or rehabilitation centers
- Community centers
- Optometry services
- Medical retail (medical supplies)
- Off-site street parking, parking structures, or surface parking lots
- Hotel facilities.

Table 4 lists the existing RCH buildings/structures as well as Phase I and Phase II components of the proposed project.

Table 4
Existing and Approved Riverside Community Hospital Uses on Site, Phase I and Phase II (a, b, and c) of the Proposed Project

ID on Figure 3	Building/ Structure	Use	Square Footage	Number of Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	To be demolished as part of Phase IIa of the proposed project
B	Building B	Hospital	176,040	273	1965	Part of Phase IIb of the proposed project: 273 beds will be moved to the new Phase IIb replacement bed tower; Building B will be used for outpatient, skilled nursing, support, and education
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change
D	Building D	Hospital	41,431	66	1958	Part of Phase IIb of the proposed project: 66 beds will be moved to the new Phase IIb replacement bed tower; Building D will be used for outpatient, skilled nursing, support, and education
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1997	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1983	To be demolished as part of Phase IIb of the proposed project
J	Parking structure	Parking	101,049	N/A	1983	To be demolished as part of Phase IIb of the proposed project
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change

Table 4
Existing and Approved Riverside Community Hospital Uses on Site, Phase I and Phase II (a, b, and c) of the Proposed Project

ID on Figure 3	Building/ Structure	Use	Square Footage	Number of Beds	Year Constructed	Action
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change
N	Medical office building 1	Medical offices	61,135	N/A	1975	To be demolished as part of Phase I of the proposed project
O	Parking structure	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
P	Medical office building	Medical offices	60,897	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change
	New Phase I hospital bed tower	Hospital	251,500	189		Part of Phase I of the proposed project
	New Phase II replacement bed tower	Hospital	600,000+			Part of Phase IIb of the proposed project
	Mixed-use building in location of Building A	Medical offices	100,000	N/A		Phase IIb of the proposed project
Total Square Footage*			1,994,245			

Source: Kimley-Horn and Associates Inc. 2013.
N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical
Note: *Buildings A, I, J, and N are not calculated in the total square footage as they are proposed for demolition as part of Phase I or Phase II of the proposed project
Shaded rows represent changes from baseline conditions and Phase II of the proposed project.

Project- and Programmatic-Level Analysis

Phase I of the proposed project, which includes the seven-story hospital bed tower, will be covered at a project level. The SP/EIR will provide the analysis needed by the City to consider approval of the development of the first tower in order for RCH to be compliant with SB 1953.

Because not all facilities of the proposed project are moving forward at this time and specific development plans are not available due to funding and market conditions, Phases IIa, IIb, and IIc will be analyzed in the forthcoming SP/EIR at a programmatic level. For Phase II, the SP/EIR will provide a general assessment of potential impacts, and provide a framework of how impacts and mitigation will be addressed in the future when those components of the project are submitted to the City for consideration.

2.6.3 Project Design Features and Construction Measures

RCH has incorporated project design features and construction measures into the proposed project to reduce the potential for environmental effects. Construction will be performed by qualified contractors, and contract documents, plans, and specifications will incorporate stipulations regarding standard legal requirements and acceptable construction practices including, but not limited to, traffic control during construction activities, noise, visual impacts, geologic conditions, drainage and water quality improvements, water quality protection and erosion and sedimentation control, construction-related solid waste, water supply, hazardous waste, and hazardous materials during construction. The project will be designed in accordance with the State of California Building Code (CBC) and Municipal Code requirements. These measures are included in Table 5, Summary of Project Design Features and Construction Measures, and referenced throughout the impact discussions in Chapter 4.0, Environmental Checklist, of this Initial Study. Additionally, Table 6 identifies the project design features that would be applied to the project in order to reduce greenhouse gas emissions. The project design features and construction measures listed in Tables 5 and 6 will be incorporated into the SP/EIR as design features of the project. Where applicable, some of these items may be included as mitigation measures.

Table 5
Summary of Project Design Features and Construction Measures

Subject Area	Design Feature or Construction Measure
Traffic control during construction activities	The applicant will prepare a traffic control plan that will specifically address construction traffic and possible lane closures within the City's public rights-of-way and prepared and approved by the City prior to project grading permit issuance. The traffic control plan will include provisions for construction times and control plans for allowance of motorists, bicyclists, pedestrians, and bus access throughout construction. This traffic control plan will also include provisions to ensure emergency vehicle passage at all times, and will include signage and flagmen when necessary. The traffic control plan will include provisions for coordinating with local school hours and emergency service providers regarding construction times.
Noise	Construction activities would generally occur Monday through Friday from 7:00 a.m. to 7:00 p.m. and on Saturdays from 8:00 a.m. to 5:00 p.m. (in compliance with the City's Municipal Code, Section 7.35).
Visual impacts	The project has been designed to alleviate many potential visual impacts. While the program requirement will drive the overall massing of the buildings, steps have been taken to minimize the overall appearance and bring down the scale of the tower. The base of the buildings will take into account pedestrian scale, pedestrian connectivity, landscaped areas, etc.

Table 5
Summary of Project Design Features and Construction Measures

Subject Area	Design Feature or Construction Measure
Geologic conditions	Prior to construction, a design-level geotechnical investigation will be conducted to evaluate the potential for ground settlement, seismic slope instability, and ground-shifting hazards that may affect the approved project and all associated facilities. The geotechnical investigation will document the types of soils on the site, the type and extent of fill material on the site, and the location and type of faults existing on the site. Where these hazards are found to exist, appropriate engineering design and construction measures that meet California Building Code (CBC) design parameters shall be incorporated into the project designs. Appropriate measures for project facilities could include construction of pile foundations, ground improvement of artificial fill areas with new artificial fill, regrading and compaction, and impermeable liners below bioswales to limit infiltration. The geotechnical investigation shall be prepared by a certified geologist and be submitted to City geology staff 90 days prior to construction of proposed structures.
Drainage and water quality improvements	The project design includes the following best management practices (BMPs) to improve overall site permeability and reduce off-site drainage flow: • Curbs and gutters will collect runoff and convey to Filterra bioretention units. • Parking lots will be designed to minimum required pavement width, according to City guidelines. • Vegetated bioswales will be used to the maximum extent possible to achieve filtration and natural treatment of the stormwater runoff from rooftops. • Where bioswales cannot be used to treat runoff, stormwater runoff from proposed structure roofs and paved areas will be conveyed to Filterra bioretention units to provide treatment before being discharged into the underground storm drain system. • Stormwater drainage from loading dock areas will be collected and treated prior to discharge off site. • On-site soils within landscaped areas will be scarified. • The City's Landscape Regulations (Chapter 19.570) will be adhered to for landscaped areas. Additional native trees and large shrubs will be planted where needed. New trees will be planted according to the City's design guidelines for the area required per tree. The landscaping will meet the City's approved landscape materials list. • Rain shutoff devices to prevent irrigation during and after precipitation will be included in the design. The irrigation system will include control mechanisms to allow staff to adjust water supplies to areas based on need. • Stormwater conveyance system inlets will include language indicating that water flows to the local water resource. • Trash receptacles will be provided on site with signage. • A fire sprinkler will be designed to discharge into the sanitary sewer. • Bioswales, Filterra bioretention units, parking lots, and trash pickup will be maintained as part of the ongoing landscaping maintenance costs.
Water quality protection and erosion and sedimentation control	In compliance with the National Pollution Discharge Elimination System (NPDES), the applicant will prepare a stormwater pollution prevention plan (SWPPP) that specifies BMPs to be implemented during project construction to prevent pollutants from contacting stormwater and control erosion and sedimentation. The SWPPP will be prepared and submitted to the Regional Water Quality Control Board (RWQCB) for review and approval prior to the start of construction.
Construction-related solid waste	Riverside Community Hospital (RCH) will designate a solid waste management coordinator who will execute the project's City-approved waste management plan. The solid waste management coordinator will work with contractors to estimate quantities of each type of material that is to be salvaged, recycled, or disposed of as waste; oversee plans for separation of materials; and review procedures for periodic collection and transportation of materials.

Table 5
Summary of Project Design Features and Construction Measures

Subject Area	Design Feature or Construction Measure
Hazardous waste	Prior to certificate of occupancy issuance for Phase II, and then after Phases IIb and IIc, RCH will update its Hazardous Materials and Waste Management Plan and Hazardous Materials Business Plan to reflect transport, storage, use, and disposal of hazardous materials following construction of each phase of the proposed project. These updates would include the use of additional chemicals currently used at the hospital as well as any new chemicals required to operate the proposed project's components. The updated documents will be submitted to County of Riverside Department of Environmental Health. All chemicals shall be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5)
Hazardous materials during construction	Prior to construction, RCH will prepare a hazardous substance management, handling, storage, disposal, and emergency response plan to be followed during construction that will ensure adherence to the construction specifications and applicable regulations regarding hazardous materials and hazardous waste, including disposal, and will ensure that construction of the proposed project will not create a significant hazard to the public or the environment.
Control of petroleum products in storage tanks	In accordance with the Code of Federal Regulations, Title 40, Part 112 (40 CFR, Part 112), prior to certificate of occupancy issuance for Phases I, IIa, IIb, and IIc, RCH will update its Spill Prevention Control and Countermeasures plan.
Cultural resources	During any phase of construction, RCH shall comply with Health and Safety Code Section 7050.5 addressing requirements should human remains be accidentally discovered during ground-disturbing activities.

Table 6
Project Design Features – Greenhouse Gases

Building Component	Design Feature
Roof	Single-ply thermoplastic roof membrane over 5/8-inch exterior gypsum sheathing over rigid insulation over metal deck with lightweight concrete fill.
	Minimum R-30 insulation.
	Certified compliant membrane with California Energy Commission definition of a cool roof. Based on G410-20 feltback membrane by Sika Sarnafil, Inc.; minimum 80 mil, white.
	Initial Solar Reflectance: Minimum measured initial solar reflectance value of 0.85 plus or minus 0.02, when tested in compliance with ASTM C 1549, ASTM E 903, or ASTM E 1918.
	3-Year Aged Solar Reflectance: Minimum measured solar reflectance value of 0.60, when maintained under normal conditions and tested in compliance with ASTM C 1549, ASTM E 903, or ASTM E 1918.
Exterior wall	Type 1: Cast stone over continuous rigid insulation on fluid applied air/vapor barrier over 5/8-inch exterior gypsum sheathing over 6-inch metal stud framing with bat insulation; total system minimum R-19.
	Type 2: Three-inch insulated composite metal panel over fluid applied water protection over 5/8-inch exterior gypsum sheathing over 9-inch metal stud framing with bat insulation; total system minimum R-19. Type 3: Six-inch architectural precast concrete over 6-inch metal stud framing, used in non-conditioned garage stair tower.

Table 6
Project Design Features – Greenhouse Gases

Building Component	Design Feature
Glazing	Vision Glass Insulating Glazing Units (IGUs): Design is based on PPG Solarban R100 solarblue tinted over clear glass (which has visible light-exterior reflectance of 15% (Viracon 2012)).
	Winter Nighttime Center-of-Glass (COG) U-Factor: Maximum 0.29 BTU per hour per square foot per degree Fahrenheit.
	Summer Daytime COG U-Factor: Maximum 0.27 BTU per hour per square foot per degree Fahrenheit.
	Total Shading Coefficient: Maximum 0.22, when calculated using a spectral data file determined in accordance with NFRC 300 and NFRC Verification Procedures.
	Total Solar Heat Gain Coefficient: Maximum 0.19, when determined in compliance with NFRC 200.
	Ceramic-Coated Spandrel Glass IGUs: Design is based on 1-inch VE1-42 Insulating HS/HS Spandrel by Viracon (which has visible light-exterior reflectance of 15% (Viracon 2012)).
	Winter Nighttime COG U-Factor: Maximum 0.29 BTU per hour per square foot per degree Fahrenheit.
	Summer Daytime COG U-Factor: Maximum 0.27 BTU per hour per square foot per degree Fahrenheit.
Lighting systems – interior	Provide individual lighting controls for minimum of 90% of building occupants to enable adjustments to suit individual task needs and preferences.
	Provide dimming or multilevel switching for all spaces larger than 100 square feet in which the connected lighting load exceeds 0.8 watts (W) per square foot.
	Provide time switches, photoelectric switches, occupancy sensors, and light sensors.
	Provide dimming controls.
	LED exit signs used.
Daylighting	Provide photocell daylighting controls for daylit spaces.
Exterior lighting	55 W compact fluorescent lamp, 39 W LED lamp pole lights, 39 W compact fluorescent bollard light.
Indoor building water use	Toilets – 1.28 gallons/flush.
	Urinals – 1.0 pints/flush.
	Faucets – 0.5 gallons/minute.
	Showers – 2.5 gallons/minute.
	Building System Process Water – Convert central energy plant cooling towers to reclaimed water.
Outdoor water use	Irrigation – Fully automatic, electronically controlled irrigation using low-flow spray heads, rotors, and drip irrigation technology.
	Irrigation Control – Controllers equipped with rain-sensing shutoff switches.
	Water Usage – Modify plant palette to use water-efficient, drought-tolerant, naturalized plant materials.

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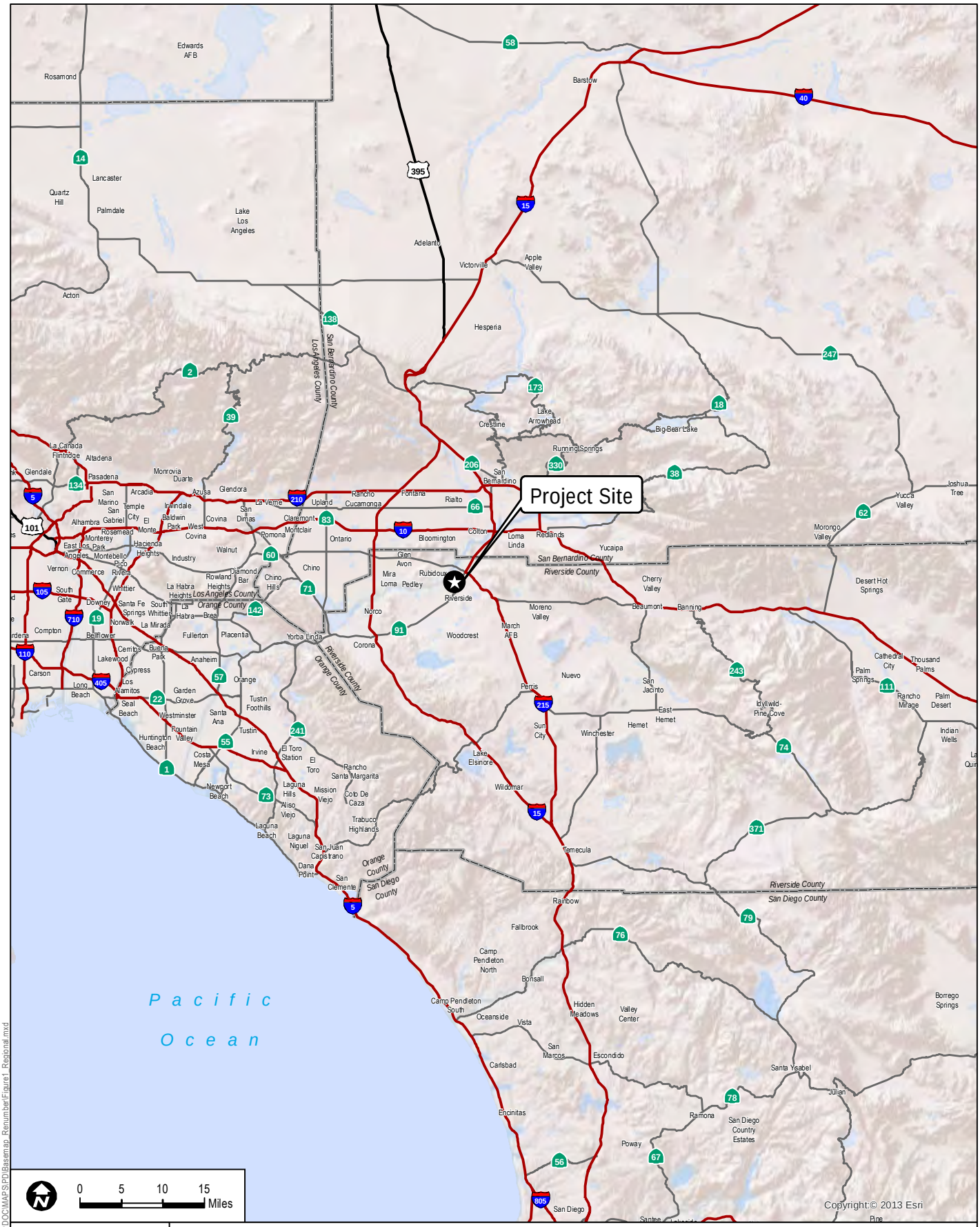

DUDEK

7824-01

SOURCE: ESRI 2013

FIGURE 1
Regional Map

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

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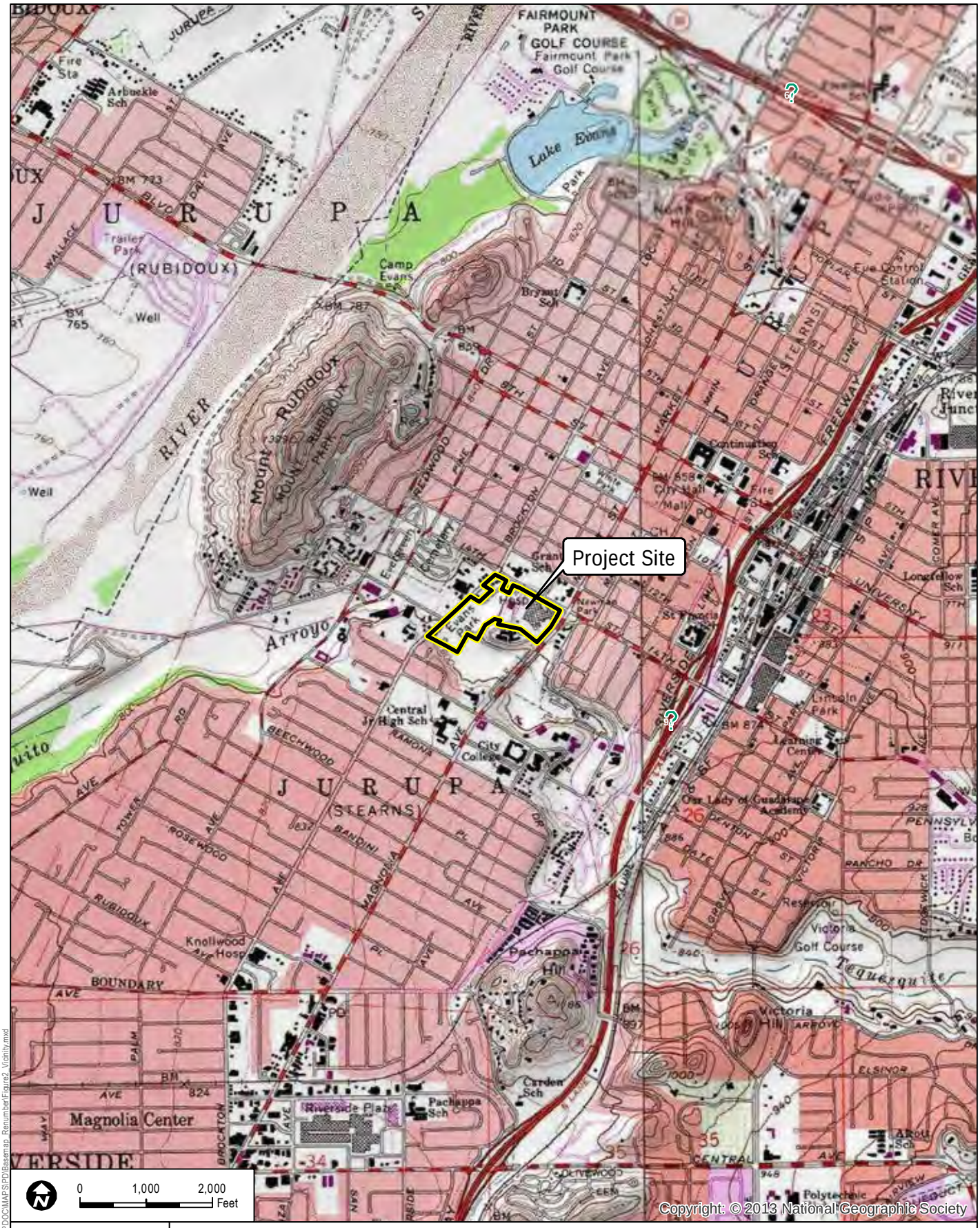

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7824-01

SOURCE: USGS 7.5-Minute Series Quadrangle (Riverside West, Riverside East)

FIGURE 2
Vicinity Map

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

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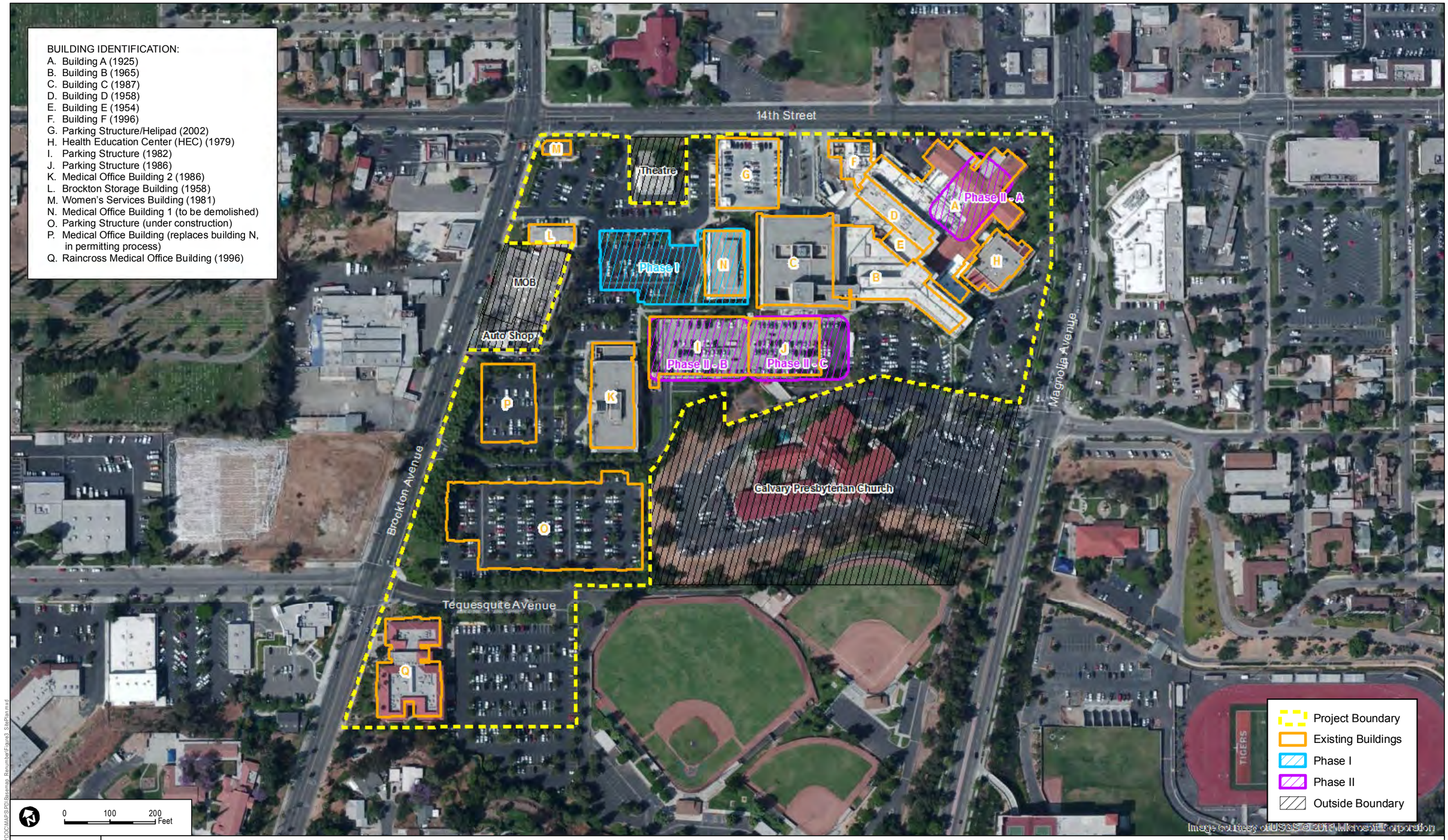

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7824-01

SOURCE: Kimley-Horn and Associates 5/20/2013, Perkins+Will 5/20/2013, BING 2013

FIGURE 3

Site Plan

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

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3.0 FINDINGS

Based on the environmental discussion provided in Section 4.0 of this Initial Study, the City finds that the proposed RCH Expansion project could have a significant adverse effect on the environment. Potentially significant effects have been identified in the Initial Study and are described herein. An environmental impact report (EIR) is therefore proposed to satisfy the requirements of the California Environmental Quality Act (CEQA; California Public Resources Code, Section 21000 et seq.).

3.1 No Impact or Less-Than-Significant Impact

Based on the environmental discussion contained in Section 4.0 of this Initial Study, the City has determined that the proposed project would have no impact, or a less-than-significant impact, in the following environmental issue areas. These issue areas will not be addressed in the forthcoming EIR analysis:

- Agricultural resources
- Geology and soils
- Mineral resources
- Population and housing
- Public services
- Recreation.

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4.0 ENVIRONMENTAL CHECKLIST

1. **Project Title:** **Riverside Community Hospital Expansion Project**
2. **Lead Agency Name and Address:** **City of Riverside**
   Community Development Department
   Planning Division
   3900 Main Street, 3rd Floor
   Riverside, California 92522
3. **Contact Person, Phone Number, and Email:** **Patricia Brenes**
   951.826.5933
   pbrenes@riversideca.gov
4. **Project Location:** **4445 Magnolia Avenue**
   Riverside, California 92501
5. **Project Sponsor's Name and Address:** **Riverside Community Hospital**
   Jose Torres
   4445 Magnolia Avenue
   Riverside, California 92501
6. **General Plan Designation:** **Downtown Specific Plan**
7. **Zoning:** **Downtown Specific Plan–Health Care**
8. **Description of Project:** **See Section 2.0, Project Description.**
9. **Existing Land Use and Setting:**

The approximately 22.5-acre project site consists of an existing hospital (Riverside Community Hospital (RCH)) including medical office buildings, administration building, health education center, storage building, women's services building, a helipad/helistop, parking structures, and surface parking lots.

10. **Surrounding Land Uses and Setting (briefly describe the project's surroundings):**

The project site is surrounded by residential uses to the northwest; Grant Elementary School and a gas station to the north; muffler services to the northeast; Newman Park and Community Medical Group of Riverside to the east; Riverside Community College to the

southeast; Calvary Presbyterian Church, Evans Park, and residential uses to the south; and commercial and industrial uses to the west.

Adjacent Existing General Plan/Land Use:

- North: DSP – Downtown Specific Plan.
- South: DSP – Downtown Specific Plan; PF – Public Facilities andInstitutional Uses
- East: DSP – Downtown Specific Plan; PF – Public Facilities and Institutional Uses.
- West: DSP – Downtown Specific Plan.

Adjacent Zoning:

- North: DSP-JC – Downtown Specific Plan Justice Center District; DSP-AS – Downtown Specific Plan Almond Street District.
- South: DSP-HC – Downtown Specific Plan Health Care District; PF – Public Facilities.
- East: DSP-HC – Downtown Specific Plan Health Care District; PF – Public Facilities.
- West: DSP-HC – Downtown Specific Plan Health Care District.

11. **Other Public Agencies Whose Approval is Anticipated to be Required (e.g., permits, financial approval, or participation agreement):**

    a. Regional Water Quality Control Board (RWQCB), Santa Ana Region – National Pollutant Discharge Elimination System (NPDES) Construction General Permit

    b. RWQCB, Santa Ana Region – Stormwater Pollution Prevention Plan (SWPPP)

    c. RWQCB, Santa Ana Region – 401 Water Quality Certification – Waste Discharge Requirement (WDR)

    d. South Coast Air Quality Management District (SCAQMD) – Dust Control Plan

    e. SCAQMD – Permits for stationary sources, such as those proposed to be installed in the Central Plant (e.g., boilers, emergency generators).

12. **Other Environmental Reviews Referenced in this Review:**

    f. Riverside General Plan 2025 (GP 2025)

    g. Zoning Code, Title 19

    h. General Plan 2025 Final Programmatic EIR (FPEIR)

    i. Title 20, Cultural Resources.

13. **Acronyms**

BMP	best management practice
CBC	California Building Code
CEQA	California Environmental Quality Act
City	City of Riverside
COG	center of glass
DOC	California Department of Conservation
EIR	environmental impact report
EMS	emergency medical services
EOP	emergency operations plan
FPEIR	GP 2025 Final Programmatic Environmental Impact Report
GP 2025	City of Riverside General Plan 2025
IGU	insulating glazing unit
MRZ	Mineral Resource Zone
MSHCP	multiple species habitat conservation plan
NPDES	National Pollutant Discharge Elimination System
OSHPD	Office of Statewide Health Planning and Development
RCH	Riverside Community Hospital
RTA	Riverside Transit Agency
RWQCB	Regional Water Quality Control Board
SB 1953	Senate Bill 1953
SCAQMD	South Coast Air Quality Management District
SP	Specific Plan
SR 60	State Route 60
SR 91	State Route 91
SWPPP	stormwater pollution prevention plan

4.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "potentially significant impact" as indicated by the checklist that follows.

☒ Aesthetics	☐ Agriculture and forestry resources	☒ Air quality
☒ Biological resources	☒ Cultural resources	☐ Geology/soils
☒ Greenhouse gas emissions	☒ Hazards and hazardous materials	☒ Hydrology/water quality
☒ Land use/planning	☐ Mineral resources	☒ Noise
☐ Population/housing	☐ Public services	☐ Recreation
☒ Transportation/traffic	☒ Utilities/service systems	☒ Mandatory findings of significance

DETERMINATION (to be completed by the lead agency):

On the basis of this initial evaluation, which reflects the independent judgment of the City of Riverside, it is recommended that:

The City of Riverside finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

The City of Riverside finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. ☐

The City of Riverside finds that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required. ☒

The City of Riverside finds that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An EIR is required, but it must analyze only the effects that remain to be addressed. ☐

The City of Riverside finds that although the proposed project could have a significant effect on the environment, because all potentially significant effects (1) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐

Signature _____ Date 7/30/13

4.2 Evaluation of Environmental Impacts

1) A brief explanation is required for all answers except "no impact" answers that are adequately supported by the information sources the lead agency cites in the parentheses following each question. A "no impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "no impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially significant impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "potentially significant impact" entries when the determination is made, an EIR is required.

4) "Negative declaration: Less than significant with mitigation incorporated" applies where the incorporation of mitigation measures has reduced an effect from a "potentially significant impact" to a "less-than-significant impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from earlier analyses, as described in item 5, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (14 CCR 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

   a. **Earlier Analysis Used.** Identify and state where they are available for review.

   b. **Impacts Adequately Addressed.** Identify which effects from the checklist in Section 4.1 were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. **Mitigation Measures.** For effects that are "less than significant with mitigation measures incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting information sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) The explanation of each issue should identify the following:

   a. The significance criteria or threshold, if any, used to evaluate each question

   b. The mitigation measure identified, if any, to reduce the impact to less than significant.

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
4.2.1 Aesthetics – Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
4.2.1a. Response *(Source: Proposed Project; City of Riverside 2007a)*: The project site is developed with an existing hospital campus owned and operated by Hospital Corporation of America. The project site is bounded by 14th Street to the north, Brockton Avenue to the west, and Magnolia Avenue to the east. Evans Park, Tequesquite Avenue, and residential development are located to the south. The proposed project consists of a phased redevelopment of the existing hospital campus. Phase I of the proposed project consists of a hospital bed tower, demolition of the existing Building N medical office building 1, and full seismic upgrades to Building B and Building D. Phase II of the proposed project consists of demolition of Building A, construction of an approximately 100,000-square-foot mixed-use building on the Building A site, a hospital bed tower, medical office buildings, and other potential hospital structures and hospital-related facilities. Figure CCM-4, Master Plan of Roadways, in the City's General Plan 2025 Circulation and Community Mobility Element designates Magnolia Avenue as a 120 foot arterial, Parkway, Scenic, and Special Boulevard. According to the City's GP Open Space and Conservation Element, the peak of Mount Rubidoux, which is located approximately 0.69 mile from the project site, provides a scenic viewpoint. The analysis of the project's potential to affect views of a scenic vista (Mount Rubidoux as well as the San Bernardino Mountains) and Magnolia Avenue, along with the potential for feasible mitigation measures, requires additional study and analysis. Therefore, this impact is considered potentially significant until it can be analyzed fully in the EIR. The forthcoming EIR will address the project's potential to affect a scenic vista.				
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?	☒	☐	☐	☐
4.2.1b. Response *(Source: Caltrans 2012;City of Riverside 2007a, Circulation and Community Mobility Element, Figure CCM-4, and Open Space and Conservation Element)*: There are no state scenic highways near the site as identified by the California Scenic Highway Program (Caltrans 2012). However, Figure CCM-4, Master Plan of Roadways, in the City's General Plan 2025 Circulation and Community Mobility Element designates Magnolia Avenue as a 120 foot arterial, Parkway, Scenic, and Special Boulevard. There are a few buildings within the RCH campus that may be considered historic and will be evaluated further in a historic resources assessment to be included in the forthcoming EIR. Additionally, there are historic buildings in close proximity to the RCH campus (e.g., Calvary Presbyterian Church) that could be indirectly affected by the project. The analysis of impacts to scenic resources, mainly to historic resources, along with the potential for feasible mitigation measures, requires additional study and analysis. Therefore, the forthcoming EIR will address impacts to historic and scenic resources.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
4.2.1c. Response *(Source: Proposed Project)*: The project site is developed with an existing hospital campus. The proposed project consists of a phased redevelopment of the existing hospital campus. Phase I of the proposed project consists of a hospital bed tower, demolition of the existing Building N medical office building 1, and full seismic upgrades to Building B and Building D. Phase II of the proposed project consists of demolition of Building A, construction of an approximately 100,000-square-foot mixed-use building on the Building A site, a hospital bed tower, medical office buildings, and other potential hospital structures and hospital-related facilities. The forthcoming EIR will address the visual changes that will occur on the site as a result of the construction of additional multistory buildings and demolition of existing structures. Photo simulations from various vantage points of existing conditions and the proposed project on the project site would be included as part of the EIR analysis. A SP is being prepared for the proposed project. The analysis of impacts to visual character and quality of the site and its surroundings and the project's compliance with the proposed SP, along with the potential for feasible mitigation measures, requires additional study and analysis and is therefore considered potentially significant until it can be analyzed fully in the EIR. The forthcoming EIR will use the photo simulations and proposed SP to analyze whether the proposed project would substantially degrade the existing visual character or quality of the site and its surroundings.				
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐
4.2.1d. Response *(Source: Proposed Project)*: The project site is already an illuminated area. Currently there are sources of nighttime light and glare from the existing hospital operation. New sources of light and glare may be present during project construction and operation. The proposed project will include a photometrics study designed to comply with the requirements and policies for the City, to be reviewed by City staff as part of the entitlement process. A SP is being prepared for the proposed project that would set guidelines for lighting requirements. The analysis of light and glare impacts, along with the potential for feasible mitigation measures, requires additional study and analysis. Therefore, this impact is considered potentially significant until it can be analyzed fully in the EIR. The forthcoming EIR will address lighting and glare within the project site and adjacent sites.				
4.2.2 Agriculture and Forestry Resources – Would the project:				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
4.2.2a. Response *(Source: DOC 2010; City of Riverside 2007a, Open Space and Conservation Element, Figure OS-2)*: The proposed project will be constructed within the existing hospital campus site. The subject site is designated "Urban and Built-Up Land" by the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (DOC 2010) and as depicted in Figure OS-2 of the City's GP 2025 (City of Riverside 2007a). The DOC (2010) defines "Urban and Built-Up Land" as occupied structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Since the site is already developed and is not located on any Farmland designations, no conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use would occur. As such, no impacts would result. This issue will not be further discussed in the EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
4.2.2b. Response *(Source: Zoning Map of the City of Riverside (2007); Land Use Policy Map (2007); City of Riverside 2007a, Open Space and Conservation Element, Figure OS-3; DOC 2012)*: The City's Land Use Zoning Map and General Plan Land Use Map indicate that no portion of the project site is located within an area that is zoned for agricultural use. The site is located within the DSP-HC (Downtown Specific Plan–Health Care District) and includes the existing hospital campus. According to the DOC's Williamson Act Map and as depicted in Figure OS-3, Williamson Act Preserves in the City's GP 2025 Open Space and Conservation Element, there are no Williamson Act contracts on the project site. Since the project is not an agricultural land use and is not under a Williamson Act contract, no impacts to an agricultural use or Williamson Act contract would occur. As such, no impacts would result. This issue will not be further discussed in the EIR.				
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in California Public Resources Code Section 12220(g)), timberland (as defined by California Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
4.2.2c. Response *(Source: PRC 12220(g) and 4526; GC 51104(g))*: The current land use on the project site is DSP-HC (Downtown Specific Plan–Health Care District). The project site is developed with an existing hospital campus. No forest land, timberland, or Timberland Production areas (as defined in the Public Resources Codes (PRC) 12220(g) and 4526 or Government Code (GC) 51104(g)) are located within or adjacent to the project site. Therefore, the proposed project would not conflict with existing zoning for forest land, timberland, or Timberland Production areas, or result in the loss or conversion of forest lands to non-forest uses, as none exist. No impacts would occur. This issue will not be further discussed in the EIR.				
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
4.2.2d. Response *(Source: PRC 12220(g))*: The project site is currently developed with a hospital campus and is not considered forest land. Therefore, implementation of the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. No impacts would occur. This issue will not be further discussed in the EIR.				
e. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒
4.2.2e. Response *(Source: DOC 2010; City of Riverside 2007a, Open Space and Conservation Element, Figure OS-2; PRC 12220(g))*: Please refer to responses 4.2.2a, 4.2.2c, and 4.2.2d. Construction and implementation of the proposed project would be within the existing hospital campus site. The subject site is designated "Urban and Built-Up Land" by the DOC Farmland Mapping and Monitoring Program (DOC 2010) and as depicted in Figure OS-2 of the City's GP 2025 (City of Riverside 2007a). No forest land areas, as defined in PRC 12220(g), are located within or adjacent to the project site. Therefore, changes to the existing environment that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use would not occur. No impacts would result. This issue will not be further discussed in the EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
4.2.3 Air Quality – Would the project:				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
4.2.3a. Response *(Source: SCAQMD 2012)*: The project site lies within the South Coast Air Basin in the SCAQMD and federal planning areas. An air quality technical report is being prepared for the EIR. The California Emissions Estimation Model (CalEEMod) land use and air emissions model would be used to estimate emissions associated with the construction, demolition, and operation of the proposed project. The analysis of air quality, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will address whether the project will conflict with SCAQMD's Air Quality Management Plan (2012).				
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
4.2.3b. Response *(Source: SCAQMD 2012)*: The project has the potential to create air emissions. Thresholds for determining significance are based upon the guidelines and thresholds developed by the State of California. The air quality technical report prepared for the EIR will analyze construction, demolition, and operational project emissions from site preparation and phased-construction (short-term impacts) and project-generated traffic, localized energy use, and landscaping (long-term impacts) against the adopted air quality significance thresholds and other federal, state, and local regulations. The analysis of air quality, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will include an air quality technical report that will address the project's potential to violate air quality standards.				
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
4.2.3c. Response *(Source: SCAQMD 2012)*: See response 4.2.3b. The analysis of air quality, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will address whether development of the proposed project will result in cumulatively considerable increases in criteria pollutants.				
d. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
4.2.3d. Response *(Source: City of Riverside 2007b, Table 5.3-B; SCAQMD 2012)*: Impacts to nearby sensitive receptors (e.g., on-site hospital patients, neighboring residents and nearby schools, daycares) to substantial pollutant concentrations will be evaluated in the air quality technical report. The analysis of air quality and SCAQMD CEQA Regional Significance Thresholds, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will include an air quality technical report that will address whether the proposed project will expose sensitive receptors to substantial pollutant concentrations.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e. Create objectionable odors affecting a substantial number of people?	☒	☐	☐	☐
4.2.3e. Response *(Source: City of Riverside 2007b, Table 5.3-B; SCAQMD 2012)*: The construction, demolition, and operation of the proposed project have the potential to generate objectionable odors during construction from equipment as well as possibly from operations of boilers, chillers, and generators. The analysis of air quality and SCAQMD CEQA Regional Significance Thresholds, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will address the potential for the creation of objectionable odors from the proposed project.				
4.2.4 Biological Resources – Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
4.2.4a. Response *(Source: Dudek 2013)*: A site visit was conducted on May 10, 2013, and a Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis and biological resource evaluation was prepared for the project. Based on the site visit and the biological technical letter, there were no candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS) that were observed on site, due to the disturbed nature of the project site. No nests or nesting behavior was observed during the survey effort. The site is developed with an existing hospital campus. However, the biological technical letter did identify that the ornamental trees and buildings may provide nesting for some species; therefore, in order to comply with the Migratory Bird Treaty Act (MBTA), nesting bird surveys should be conducted prior to any construction activities. Since no candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS were observed on site or are expected to occur, the forthcoming EIR will only address potential impact to nesting of bird species, and provide applicable mitigation measures to ensure the MBTA is complied with in the future.				
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
4.2.4b. Response *(Source: Dudek 2013)*: A site visit was conducted on May 10, 2013, and an MSHCP consistency analysis and biological resource evaluation was prepared for the project. One trapezoidal, concrete-lined channel is located east of Magnolia Avenue but not within the proposed project boundaries. No impacts are proposed to this feature. Based on the site visit and the biological technical letter, no riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS was observed on site, due to the disturbed nature of the of the project site. The site is developed with an existing hospital campus. No impacts are expected and this issue will not be discussed further in the forthcoming EIR.				
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
4.2.4c. Response *(Source: Dudek 2013)*: The site is developed with an existing hospital campus. A site visit was conducted on May 10, 2013, and an MSHCP consistency analysis and biological resource evaluation was prepared for the project. Based on the site visit and the biological technical letter, no federally protected wetlands as defined by Section 404 of the Clean Water Act exist on site, due to the disturbed nature of the of the project site. One trapezoidal, concrete-lined channel is located east of Magnolia Avenue but not within the proposed project boundaries. No impacts are proposed to this feature. Therefore, the forthcoming EIR will not discuss this item further.				
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
4.2.4d. Response *(Source: Dudek 2013)*: The project site is developed with an existing hospital campus and surrounded by existing development on all sides. Therefore, the site does not function as a regional wildlife corridor or habitat linkage. No impacts will occur and this issue will not be discussed further in the forthcoming EIR.				
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
4.2.4e. Response *(Source: City of Riverside 2007c)*: There are no general plan policies related to protection of biological resources applicable to the project, nor is there a City tree preservation policy that would affect the project. Therefore, the proposed project is not subject to any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The City does have an Urban Forestry Policy Manual (City of Riverside 2007c), but it does not relate to the ornamental landscaping on the project site. No impacts will occur and this issue will not be discussed further in the forthcoming EIR.				
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐
4.2.4f. Response *(Source: County of Riverside 2007)*: The project site has previously been disturbed and is currently developed with a hospital campus. The project is subject to compliance with the Western Riverside MSHCP because the City of Riverside is a Permittee to the MSHCP. The project site is not located in an area subject to Cell Criteria under the MSHCP, and therefore has no conservation requirements toward building out the MSHCP Reserve. The project site does not support any riparian or riverine resources that would be affected by the project, and is therefore compliant with Section 6.1.2 of the MSHCP. Additionally, the project site is not within a Narrow Endemic Plant Species Survey Area per Section 6.1.3 of the MSHCP; a Criteria Area Species Survey Area or Additional Species Survey Area per Section 6.3.2 of the MSHCP; or any other applicable conservation plan. Since no Conservation Areas are near the project site, compliance with Section 6.1.4, Urban–Wildlands Interface Guidelines, is not needed. As such, impacts are considered less than significant. This issue will not be addressed in the forthcoming EIR.				
4.2.5 Cultural Resources – Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	☒	☐	☐	☐
4.2.5a. Response *(Source: City of Riverside 2007a, Historic Preservation Element;* Riverside Municipal Code: Title 20 – Cultural Resources. *2007e)*: Some of the structures on the project site may be considered historic resources per CEQA, based on their age (when they were constructed), what they were constructed for, and the architect who designed the building. Specifically, Building A and Building N will need to be evaluated further for potential significance. A cultural resources/historic				

	Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
	structure eligibility report is being prepared for the EIR and will determine whether any structures on the existing hospital campus areas as well as surrounding buildings may be significant historical resources. Title 20 of the Riverside Municipal Code establishes procedures for preserving, protecting, and designating significant cultural resources should any structures be considered a historic/cultural resource (City of Riverside 2007e). The analysis of impacts to historical resources, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will address any impacts to historical resources.				
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☒	☐	☐	☐
4.2.5b.	Response *(Source: City of Riverside 2007b, Figure 5.5-1 and Figure 5.5-2)*: The project site has an unknown archaeological sensitivity on the City's GP 2025 FPEIR Figure 5.5-1 and an unknown prehistoric cultural resources sensitivity on the City's GP 2025 FPEIR Figure 5.5-2 (City of Riverside 2007b). Areas classified as unknown are primarily those areas that were urbanized prior to the mid-1970s and may contain buried archaeological deposits dating to the City's prehistoric and historical periods (City of Riverside 2007b). A cultural resources/historic structure eligibility report will be prepared for the EIR. The analysis of impacts to archaeological resources, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will address any impacts to archaeological resources.				
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
4.2.5c.	Response *(Source: City of Riverside 2007a, Policy HP-1.3 and Policy HP-1.4)*: The proposed project does not anticipate destroying any paleontological resource or unique geologic feature, given the disturbed nature of the site. No known paleontological resources have been found on site during any past development. Impacts are considered to be less than significant. Therefore, the forthcoming EIR will not address any impacts to paleontological resources.				
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
4.2.5d.	Response *(Source: City of Riverside 2007b, Figure 5.5-1 and Figure 5.5-2; PRC 5097.98; California Health and Safety Code, Sections 7050.5, 7051, 5052, and 7054)*: The site is not known to be an informal/formal cemetery. The project site is fully developed with an existing hospital campus. Due to past excavation and fills on the project site, it is highly unlikely that human remains are present. In the unlikely event that human remains are discovered, state and local laws require that the county coroner be notified. PRC 5097.8 addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission to resolve disputes regarding the disposition of such remains. The proposed project will be required to comply with PRC 5097.98 should any unknown human remains be discovered during site disturbance. Additionally, Sections 7050.5, 7051, 5052, and 7054 of the Health and Safety Code collectively address the illegality of interference with human burial remains, as well as the disposition of Native America burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures. The project design features (Section 2.6.2 Table 5) includes compliance with these codes sections. This issue will not be further discussed in the EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
4.2.6 Geology and Soils – Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐

4.2.6a.i. Response *(Source: DOC 2007; City of Riverside 2007b, Figure 5.6-2; 2007a, Figure PS-1; AMEC 2013 (Appendix C))*:

The project site is not within an Alquist-Priolo Earthquake Fault Zone (DOC 2007). However, the City is located in a region with several active fault lines. The project site is located approximately 7 miles from the San Jacinto Fault Zone and approximately15 miles from the Elsinore Fault Zone, two of the closest mapped fault zones to the City of Riverside. A geotechnical report that was prepared for the project stated that active or potentially active faults with the potential for surface fault rupture are not known to cross or project toward the site and the potential for surface fault rupture at the site is low (AMEC 2013). Although the site is not within a fault hazard zone and the potential for fault rupture is low, the existing buildings (Buildings A, B, and D) are currently non-compliant with Senate Bill (SB) 1953, the Alfred E. Alquist Hospital Facilities Seismic Safety Act. SB 1953 requires replacement or retrofitting of hospital buildings to higher seismic safety standards by 2030. Buildings B and D will be retrofitted to comply with the mandated requirements of SB 1953 as part of Phase I of the proposed project. Building A will be demolished during Phase IIa of the proposed project. Additionally, an SP is being prepared for the proposed project to provide guidelines for project design to ensure that the construction of the buildings meet California Building Code (CBC) standards. Therefore, a less-than-significant impact is expected and this issue will not be further discussed in the EIR.

ii. Strong seismic ground shaking?	☐	☐	☒	☐

4.2.6a.ii. Response *(Source: City of Riverside 2007, Figure 5.6-2; AMEC 2013 (Appendix C))*:

According to the City's GP 2025 FPEIR, Appendix E, "the effect of an earthquake originating on any given fault will depend primarily upon its distance from the project site and the size earthquake (amount of energy release) that the fault is likely to generate. In general, the more distant the fault is and the smaller the potential earthquake, the less effect" (City of Riverside 2007b). The project site is located approximately 7 miles from the San Jacinto Fault Zone and approximately15 miles from the Elsinore Fault Zone, two of the closest mapped fault zones to the City of Riverside. According to the geotechnical report prepared for the RCH site by AMEC (2013), the location of the site relative to known active or potentially active faults indicates that the site could be subjected to significant ground shaking caused by earthquakes. Proper engineering design and construction in conformance with CBC standards would ensure that seismic ground shaking would be less than significant. An SP is being prepared for the proposed project to provide guidelines for project design to ensure that the construction of the buildings meets CBC standards. Therefore, impacts related to seismic ground shaking are considered less than significant. This issue will not be further discussed in the EIR.

iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

4.2.6a.iii. Response *(Source: City of Riverside 2007b, Figure 5.6-2 and Figure 5.6-3; 2007a, Figure PS-1, Figure PS-2, and Public Safety Element; AMEC (2013); OSHPD (2011))*:

According to Figure PS-1 of the City's GP 2025, the project site is not located on or near an earthquake fault or fault zone (City of Riverside 2007a). The nearest known earthquake fault is located approximately 7 miles from the project site. Figure PS-2 of the City's GP 2025 depicts the project site being within medium, high, and very high liquefaction zones (City of Riverside 2007a). Based on the groundwater measurements by AMEC (2013) and prior investigations, groundwater levels are expected to be 20 feet below the ground surface. However, since the on-site soils below a

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
depth of 10 to 20 feet are in a dense to very dense state, AMEC determined that the liquefaction potential at the site is low. Impacts related to ground failure such as from liquefaction are considered less than significant based on the information provided by the AMEC report, as well as due to the fact that the new structures being proposed by the project will all be designed to CBC standards to anticipate impacts associated with seismic-related ground failure. Additionally, the Office of Statewide Health Planning & Development's (OSHPD's) Facilities Development Division will review and approve the plans and specifications of the proposed hospital building towers, medical office buildings, and related hospital facilities as well as any alterations to existing buildings to ensure compliance with the provisions of the CBC, Title 24, California Code of Regulations (OSHPD 2011). Impacts related to ground failure such as from liquefaction are considered less than significant. This issue will not be further discussed in the EIR.				
iv. Landslides?	☐	☐	☒	☐
4.2.6a.iv. Response *(Source: City of Riverside 2007b, Geology and Soils and Figure 5.6-1; 2007a, Public Safety Element; AMEC 2013 (Appendix C))*: The Geology and Soils section of the City's GP 2025 FPEIR states that "areas of high susceptibility to seismically induced landslides and rockfalls correspond to steep slopes in excess of 30 percent" (City of Riverside 2007b). Figure 5.6-1 of the City's GP 2025 FPEIR indicates that the project area is located on land identified as having a 0% to 10% slope, which is the lowest of the four potential categories (City of Riverside 2007b). Additionally, the existing hospital campus site has been previously excavated, filled, graded, and leveled. According to the geotechnical report by AMEC (2013), the majority of the site is relatively level and there are no known landslides at the site, nor is the site in the path of any known or potential landslides. The existing slope at the eastern portion of the site will be modified/eliminated with the construction of a retaining wall. The retaining wall will follow the design recommendations in the geotechnical report and will also be outlined in the proposed SP. Impacts are considered less than significant and this issue will not be further discussed in the EIR.				
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
4.2.6b. Response *(Source: City of Riverside 2007b, Figure 5.6-1)*: According to Figure 5.6-1 of the City's GP 2025 FPEIR, the project site is located in a region identified as having a 0% to 10% slope, the lowest category of slope identified on that figure (City of Riverside 2007b). Construction activities such as excavation and grading may have the potential to cause soil erosion or the loss of topsoil. Short-term erosion effects during the construction phase of the project would be prevented through required implementation of a stormwater pollution prevention plan (SWPPP) through compliance with the National Pollutant Discharge Elimination System (NPDES) program and the incorporation of best management practices (BMPs) intended to reduce soil erosion. The SWPPP includes standard construction methods such as temporary detention basins to control on-site and off-site erosion. The SWPPP is required by the City during plan review and approval of project improvement plans; therefore, with implementation of an approved SWPPP, impacts resulting from erosion during construction operations would be less than significant. A network of storm drains and gutters would be maintained and upgraded as necessary and provided throughout the developed site, along with landscaped areas and groundcovers; therefore, soil erosion is not anticipated to be an issue upon buildout of the project. Impacts would be less than significant and this issue will not be further discussed in the EIR.				
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
4.2.6c. Response *(Source: City of Riverside 2007a, Figure PS-1 and Figure PS-2; 2007b, Figure PS-3 and Figure 5.6-1; AMEC 2013 (Appendix C))*: According to Figure PS-1 of the City's GP 2025, the nearest fault zone is located approximately 7 miles from the project site. Figure PS-2 of the City's GP 2025 indicates that the project site is located within moderate, high, and very high liquefaction zones. Figure PS-3 of GP 2025 indicates that the project site is not located in an area with soils				

	Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
	identified as having a high shrink-swell potential (City of Riverside 2007a). The project site is not located in an area with steep slopes that could result in a landslide, as indicated on Figure 5.6-1 of the City's GP 2025 FPEIR (City of Riverside 2007b). However, according to the geotechnical report by AMEC (2013), the potential for liquefaction, lateral spreading, and subsidence affecting the site is considered low. The on-site soils below a depth of 10 to 20 feet are in a dense to very dense state. Therefore, the project site is not considered to be susceptible or located on a site that is unstable. This issue is considered less than significant and will not be further discussed in the EIR.				
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
4.2.6d.	Response *(Source: City of Riverside 2007a, Figure PS-3; 2007b; AMEC 2013 (Appendix C))*: Soils containing high clay content often exhibit a relatively high potential to expand when saturated and to contract when dried out. The project site does not contain clay soils; the natural soils on site consist generally of silt, silty sand, and sand and gravel. The upper natural soils are loose and medium stiff at present moisture content and may become somewhat weaker and more compressible when wet. The deeper sand and gravel deposits are dense to very dense. Figure PS-3 of the City's GP 2025 indicates that the project site is not located in an area with soils that have a high shrink-swell potential, thereby substantially reducing the potential for adverse impacts related to being located on expansive soils (City of Riverside 2007a). Impacts are considered less than significant. This issue will not be discussed further in the forthcoming EIR.				
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
4.2.6e.	Response *(Source: Proposed Project; City of Riverside 2007b, Figure 5.16-6)*: No septic tanks exist on the project site. There are existing sewer pipelines along Magnolia Avenue and Brockton Avenue. The proposed project will connect to the existing sewer systems and will not involve other alternative wastewater disposal methods. Therefore, no impacts are expect This issue will not be addressed in the forthcoming EIR.				
4.2.7	*Greenhouse Gas Emissions – Would the project:*				
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
4.2.7a.	Response *(Source: Proposed Project)*: The proposed project has the potential to generate greenhouse gas emissions that may have a significant impact on the environment. The analysis of greenhouse gas emissions, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will include an air quality technical report that will address greenhouse gas emissions.				
b.	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐
4.2.7b.	Response *(Source: City of Riverside 2007b, Section 5.3)*: See response 4.2.7a. The analysis of greenhouse gas emissions, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will include an air quality technical report that will address how the proposed project would relate to any plan, policy, or regulation set forth to address greenhouse gas emissions.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
4.2.8 Hazards and Hazardous Emissions – Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
42.8a. Response *(Source: Proposed Project)*: Pursuant to the City's Fire Department requirements, RCH currently implements a Hazardous Materials Business Plan for its existing hospital campus to regulate the routine transport, use, or disposal of hazardous materials and to identify what hazardous materials are on site to allow emergency responders to know what hazardous materials would be encountered in the event of an emergency. RCH would be required by the City's Fire Department to update its Hazardous Materials Business Plan to reflect the changes proposed by the proposed project to the existing hospital campus. Additionally, RCH is required to comply with the provisions of the City's Fire Code and any additional element as required in the California Health and Safety Code, Article 1, Chapter 6.95 for the Business Emergency Plan. Both the federal and state governments require all businesses that handle more than the specified amount of hazardous materials to submit a business plan to a regulating agency. Due to the existing regulations that would govern any small quantities of hazardous materials that might be associated with the hospital use, and since RCH implements its own Hazardous Materials Business Plan that addresses the use of use, transport, and disposal of any hazardous materials used by the hospital, impacts are considered less than significant. This issue will not be addressed further in the forthcoming EIR.				
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
4.2.8b. Response *(Source: City of Riverside 2007a, Public Safety Element; 2007b; California Health and Safety Code)*: Please refer to Response 4.2.8a. RCH is required to comply with the provisions of the City's Fire Code and any additional element as required in the California Health and Safety Code, Article 1, Chapter 6.95 for the Business Emergency Plan. Both the federal and state governments require all businesses that handle more than specified amount of hazardous materials to submit a business plan to a regulating agency. RCH is required to update its Hazardous Materials Business Plan to incorporate the changes to the existing hospital operation with implementation of the proposed project to City's Fire Department. This issue is considered less than significant and will not be addressed further in the forthcoming EIR.				
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☒	☐	☐	☐
4.2.8c. Response *(Source: City of Riverside 2007b, Section 5.7, Figure 5.13-2, and Table 5.13-D)*: There are four schools within one-quarter mile of existing or proposed schools. Grant Elementary School is located approximately 0.02 mile north of the site; a private elementary school and daycare facility is located at the corner of Terracina Drive and Magnolia Avenue, approximately 0.20 mile south of the project site; Central Middle School is located 0.13 mile southeast from the closest boundary of the project site, along Magnolia Avenue and Terracina Drive; and the Riverside City College campus core is located approximately 0.20 mile southeast of the project site. The Riverside City College baseball fields are located 0.09 mile southeast of the project site. The current use is an existing hospital campus that handles acutely hazardous medical materials. Implementation of the proposed project could increase the amount of acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. This issue will be discussed more fully in the forthcoming EIR.				
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☒	☐	☐	☐
4.2.8d. Response *(Source: DTSC 2007bCity of Riverside 2007b, Figure 5.7-1, Tables 5.7-A 5.7-B, and 5.7-C; DTSC 2007a, 2007b; SWRCB 2013)*: Government Code Section 65962.5 combines several regulatory lists of sites that may pose a hazard related to hazardous				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
materials or substances. Hazardous materials during construction activities for the proposed project would include diesel, gasoline, lubricant oils. According to Figure 5.7-1 of the City's GP 2025 FPEIR, there are no known hazardous waste sites within the project site (City of Riverside 2007b). However, the project site and adjacent properties contain leaking underground fuel tanks (LUSTs) as obtained from Geotracker (SWRCB 2013) and as depicted on the DTSC EnviroStor map database (2007a). A LUST site is a property that is undergoing cleanup due to an unauthorized release from an underground storage tank (UST) system (DTSC 2007b). Phase II Environmental Site Assessment (ESA) associated with underground storage tank on the northeastern portion of the project site have been previously conducted. A Phase I ESA was conducted on the property on May 22, 2013. The forthcoming EIR will analyze this impact further using previous Phase II ESA that was conducted on the northeastern portion of the project site along with the Phase I ESA for this project, and analyze potential feasible mitigation measures that may be needed to reduce impacts. Therefore, the forthcoming EIR will include further analysis of this impact.				
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☒	☐	☐	☐
4.2.8e. Response *(Source: City of Riverside 2007b, Figure 5.7-2)*: The project site is not located within an airport influence area. However, the project site is located approximately 1.43 miles from Flabob Airport. Although not considered a public or private airport, there is an existing helistop/helipad atop the hospital's parking structure along 14th Street. The forthcoming EIR will discuss the existing and proposed operation of the helistop/helipad and determine whether mitigation measures are necessary. This issue will be addressed further in the forthcoming EIR.				
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
4.2.8f. Response *(Source: City of Riverside 2007b, Figure 5.7-2)*: There are no private airstrips in the project vicinity; therefore, the proposed project would not result in a safety hazard for people residing or working in the project area and no impact would result. This issue will not be discussed in the forthcoming EIR.				
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐
4.2.8g. Response (*Source: Proposed Project*) The proposed project shall comply with the City's Emergency Operations Plan (EOP). A traffic impact analysis is being prepared for the proposed project that will address any potential interference with an adopted emergency response plan or evacuation plan should there be any lane closures or lane detours during construction activities. Operation of the proposed project would not interfere with the City's EOP as all existing access driveways would remain in operation throughout project buildout. Additionally, the proposed site plan, including the access driveways, will be reviewed and approved by the fire department during plan check review. The analysis of potential interference with the City's EOP, with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will include a traffic impact analysis that will address the project's consistency with the City's EOP and provide a discussion in the traffic impact section of the EIR of how the project will address emergency access.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐
4.2.8h. Response *(Source: City of Riverside 2007b, Figure 5.7-3)*: According to Figure 5.7-3 of the GP 2025 FPEIR, the project site is not within a fire hazard area. Additionally, the project site is surrounded by development. Therefore, the risk of a large, high-intensity fire impacting the site is very low. Impacts are considered to be less than significant and this issue will not be addressed further in the forthcoming EIR.				
4.2.9 Hydrology and Water Quality – Would the project:				
a. Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
4.2.9a. Response *(Source: Proposed Project)*: While it is not presumed that the site will have a substantial impact on water quality standards or waste discharge requirements, this issue will be analyzed further in the forthcoming EIR as will any potentially feasible mitigation measures that may apply to this impact. This issue is considered potentially significant until it can be fully analyzed in the EIR.				
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐
4.2.9b. Response *(Source: Proposed Project)*: The forthcoming EIR will analyze the potential source of potable water for the site and address whether or not groundwater resources could be depleted as a result of the project implementation. The analysis of groundwater resources, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be fully analyzed in the EIR. This issue will be addressed in the forthcoming EIR.				
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?	☒	☐	☐	☐
4.2.9c. Response *(Source: Proposed Project)*: The proposed project has the potential to modify the existing drainage pattern of the site by placing new structures in locations where no structures are located currently. The analysis of the drainage patterns, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. This issue will be addressed in the forthcoming EIR.				
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☒	☐	☐	☐
4.2.9d. Response *(Source: Proposed Project)*: See response 4.2.9c.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☒	☐	☐	☐
4.2.9e. Response *(Source: Proposed Project)*: The analysis of the site's potential to contribute runoff and create an additional source of polluted runoff, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Potential impacts will be discussed in the forthcoming EIR.				
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐
4.2.9f. Response *(Source: Proposed Project)*: There are no other sources or characteristics of the project that would substantially degrade water quality. Impacts are considered to be less than significant. This issue will not be discussed further in the forthcoming EIR.				
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
4.2.9g. Response *(Source: City of Riverside 2007b, Figure 5.8-2)*: The project site is not located within a 100-year flood hazard area. The project does not propose the development of housing. No impact would result. This issue will not be addressed in the forthcoming EIR.				
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
4.2.9h. Response *(Source: City of Riverside 2007b, Figure 5.8-2)*: Although the northwest portion of the site is located within the Sycamore Canyon Dam and Box Springs Dam inundation area, the project site is not located within a 100-year flood hazard area. Therefore, the proposed project would not place structures within a 100-year flood hazard area. Impacts are considered less than significant. This issue will not be addressed in the forthcoming EIR.				
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
4.2.9i. Response *(Source: City of Riverside 2007b, Figure 5.8-2; AMEC 2013 (Appendix C))*: The project site is not within a flood zone. However, the northwest portion of the site is located within the Sycamore Canyon Dam and Box Springs Dam inundation area as shown in Figure 5.8-2 of the GP 2025 FPEIR (City of Riverside 2007b). Dams are continually monitored by various governmental agencies (such as the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers) to guard against the threat of dam failure. The geotechnical report that was prepared for the project stated that the possibility of dam failures during an earthquake has been addressed by the California Geological Survey in the earthquake planning scenarios for a magnitude 8.3 earthquake on the San Andreas Fault Zone and a magnitude 7.0 earthquake on the Newport-Inglewood Fault Zone, which concluded that catastrophic failure of a major dam as a result of a scenario earthquake is regarded as unlikely (AMEC 2013). Current design and construction practices and ongoing programs of review, modification, or total reconstruction of existing dams are intended to ensure that all dams are capable of withstanding the maximum credible earthquake for the site (AMEC 2013). Therefore, AMEC determined that the potential for inundation at the site as a result of an earthquake-induced dam failure is considered low. Impacts related to exposure of people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a failure of a levee or dam, is considered less than significant. This issue will not be addressed in the forthcoming EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐
4.2.9j. Response *(Source: City of Riverside 2007b, Figure 5.8-2, Section 5.8; AMEC 2013 (Appendix C))*: A seiche is a to-and-fro vibration of an enclosed water body that is similar to the slopping of water in a basin. Seiches are often triggered by earthquakes. Tsunamis are tidal waves that occur in coastal areas. The project site is located approximately 1 mile south of Lake Evans, which is an area likely to be subject to seiche. However, AMEC determined that the site is not located downslope of any large bodies of water that could adversely affect the site in the event of earthquake-induced seiches. The project site is not located near any coastal areas, which are subject to tsunamis. The site is located approximately 40 miles inland from the Pacific Ocean and at an elevation of around 830 feet above mean seal level. AMEC determined that the risk of a tsunami affecting the site is low. The project site is located near the Santa Ana River, which is not subject to significant mudflows since there are no slopes or mountainous areas that would contribute to mudflow risks. Given the project's location and since there are no features nearby that would pose a threat from seiche, tsunami, or mudflow, this impact is considered less than significant and this issue will not be addressed further in the forthcoming EIR.				
4.2.10 Land Use and Planning – Would the project:				
a. Physically divide an established community?	☐	☐	☒	☐
4.2.10a. Response *(Source: City of Riverside 2012)*: The proposed project is located in downtown Riverside. The development of new hospital bed towers, an approximately 100,000-square-foot mixed-use building, medical office buildings, and other hospital-related facilities and infrastructure, as well as the demolition of some existing medical structures within the existing hospital campus, would not divide the existing community surrounding the site. Nearby residential areas exist to the northwest, south, and southwest of the project area. The proposed project will not divide an established community, but further provide healthcare and emergency medical services (EMS) for community disaster preparedness within the Riverside community and Inland Empire region as well as enhancing the hospital's overall capabilities to respond to mass casualty events and other life-threatening situations. The proposed project will be consistent with the proposed SP guidelines that are intended to enhance the public's access to the RCH campus. As such, impacts are considered less than significant. This issue will not be addressed in the forthcoming EIR.				
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐
4.2.10b. Response *(Source: Proposed Project Zoning Map of the City of Riverside (2007); Land Use Policy Map (2007);* The project site is currently in the DSP-HC (Downtown Specific Plan–Health Care District) GP and zone designations. The site currently is developed with a hospital facility that is in compliance with the DSP-HC. RCH is proposing an SP that would supersede the DSP-HC and rezone the site to RCH–Specific Plan (RCH-SP) for the site. The proposed SP will include guidelines for development and implementation of the proposed project. Additionally, the project applications to the City include a General Plan Amendment (GPA) to officially include the proposed SP within the GP. The analysis of project consistency with the proposed SP, rezone, and GPA, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. This issue will be addressed in the forthcoming EIR.				
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐
4.2.10c. Response *(Source: County of Riverside 2007)*: See also response to 4.2.4f. The project is subject to compliance with the Western Riverside MSHCP. The project site is not located in an area subject to Cell Criteria under the MSHCP. Additionally, the project site is not located within any other special survey areas per Sections 6.1.2, 6.1.3, and 6.3.2 of the MSHCP. The project site has previously been disturbed and is currently developed with a hospital campus. As such, impacts are considered less than significant. This issue will not be addressed in the forthcoming EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
4.2.11 Mineral Resources – Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
4.2.11a. Response *(Source: City of Riverside 2007a, Figure OS-1)*: The proposed project lies within Mineral Resource Zone 3 (MRZ-3) as depicted on Figure OS-1 of the City's GP 2025 (City of Riverside 2007a), indicating that the area contains known or inferred mineral occurrences of undetermined mineral resources significance. The project site has been previously disturbed and is developed with an existing hospital campus. Based on the MRZ-3 designation and given that the site is currently developed, the proposed project is not likely to result in the loss of a known mineral resource. Impacts are considered less than significant. This issue will not be addressed further in the forthcoming EIR.				
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☒	☐
4.2.11b. Response *(Source: City of Riverside 2007b, Figure 5.10-1)*: See response to 4.2.11a. This issue will not be discussed further in the forthcoming EIR.				
4.2.12 Noise – Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
4.2.12a. Response *(Source: City of Riverside 2007f; 2007b, Figure 5.11-6 and Table 5.11-I)*: Noise levels are regulated by the City's Municipal Code, Title 7 (City of Riverside 2007f). During project construction and demolition activities, the proposed project would result in a temporary increase in noise levels due to the use of construction equipment. The project would also generate additional traffic on local streets from patients, the public, and emergency vehicles using the hospital facilities. This additional traffic may impact the existing noise level of the area. A noise impact analysis is being prepared to analyze the potential impacts from construction, demolition, and operational phases of the proposed project. The analysis of noise levels, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. The noise impact analysis will be summarized in the forthcoming EIR.				
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
4.2.12b. Response *(Source: City of Riverside 2007b, Table 5.11-G)*: The proposed project would involve earthwork to produce finish grades and provide proper recompacting, resulting in temporary groundborne vibration and noise levels. Once completed, the project would not expose persons to or generate groundborne vibration or groundborne noise. The analysis of groundborne noise levels, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. A noise impact analysis is being prepared to analyze the level of vibration and groundborne noise that will be addressed in the forthcoming EIR.				
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
4.2.12c. Response *(Source: City of Riverside 2007f; 2007b, Section 5.11)*: The project would involve the introduction of a noise source associated with an increase in traffic on the project site and adjacent roadways, as well as from the operation of the project, thereby changing the ambient noise levels in the project vicinity. The noise impact analysis will evaluate the extent of this increase and level of impact. The analysis of ambient noise levels, along with the potential for feasible mitigation measures, requires additional study and analysis				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will address the project's potential to increase ambient noise levels in the project vicinity above levels existing without the project.				
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
4.2.12d. Response *(Source: City of Riverside 2007b, Table 5.11-J)*: The proposed project has the potential to temporarily increase ambient noise levels from construction activities. A noise impact analysis is being prepared. The analysis of ambient noise levels, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will address the project's potential to increase ambient noise levels in the project vicinity above levels existing without the project.				
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐
4.2.12e. Response *(Source: City of Riverside 2007b, Figure N-8)*: See discussion under Section 4.2.8e. The project site is not located within an airport influence area. However, the project site is located approximately 1.43 miles from Flabob Airport. Additionally, there is an existing helistop/helipad atop the hospital's parking structure along 14th Street. A noise impact analysis is being prepared to analyze the potential impacts to exposure of people residing or working in the project area to excessive noise levels as a result of construction, demolition, and operational phases (including the helipad) of the proposed project. The analysis of noise levels to people residing or working within 2 miles of a public airport, along with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. The noise impact analysis will be summarized in the forthcoming EIR.				
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
4.2.12f. Response *(Source: City of Riverside 2007a, Figure 5.7-2)*: The proposed project does is not located in the vicinity of a private airstrip. No impacts will result. This issue will be not discussed in the EIR.				
4.2.13 Population and Housing – Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
4.2.13a. Response *(Source: Proposed Project)*: The proposed project is the development of new hospital bed towers, an approximately 100,000-square-foot mixed-use building, medical office buildings, and other hospital-related facilities and infrastructure, as well as the demolition of some existing medical structures on the existing hospital campus. No housing is being proposed with this project; therefore, the proposed project will not generate population growth. Existing infrastructure systems are adequate to serve the project and therefore no improvements to infrastructure are needed to serve the project. Conversely, the proposed project will continue to provide hospital EMS for community disaster preparedness within the Riverside community and Inland Empire region as well as enhancing the hospital's overall capabilities to respond to mass casualty events and other life-threatening situations. No adverse impacts related to population growth would result from the project. This issue will not be addressed in the forthcoming EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
4.2.13b. Response *(Source: Proposed Project)*: The project site does not currently support any housing; therefore, substantial numbers of existing housing would not be displaced and the construction of replacement housing elsewhere would not be necessary as a result of the proposed project. Therefore, no impacts would result. This issue will not be addressed in the forthcoming EIR.				
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
4.2.13c. Response *(Source: Proposed Project)*: The project site does not currently support any housing; therefore, substantial numbers of people would not be displaced, necessitating the construction of replacement housing elsewhere, as a result of the proposed project. Therefore, no impacts are expected. This issue will not be addressed in the forthcoming EIR.				
4.2.14 Public Services – Would the project:				
14. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a. Fire protection?	☐	☐	☒	☐
4.2.14a. Response *(Source: City of Riverside 2007b, Table 5.13-B)*: The City's Fire Department operates 14 fire stations. Station 1 (Downtown) is located approximately 0.57 mile northeast of the project site and will serve the project site. Fire engine vehicles currently enter and exit the site via the access driveway on 14th Street, which will remain as the primary emergency access. Other emergency access could be from Magnolia Avenue and Brockton Avenue, if needed. The proposed project is currently served and will be adequately served by this fire station with implementation of the proposed project. Additionally, the project is consistent with the land uses envisioned in the City's GP 2025 (City of Riverside 2007a), which is the document used by fire services to evaluate service needs. The proposed SP that would be prepared for the project would not change the current use of the project site. The proposed project would be required to comply with the requirements of the City's Fire Department and Uniform Fire Code. Therefore, the proposed project is not expected to result in new facilities related to fire services. Impacts are considered less than significant. The forthcoming EIR will not address this issue further.				
b. Police protection?	☐	☐	☒	☐
4.2.14b. Response *(Source: City of Riverside 2007a, Figure PS-8; 2007b, Figure 5.13-1)*: The project site is located within City's North Policing Center. Orange Police Station and Fairmount Police Station are located within the North Policing Center. The project site is consistent with the land uses envisioned in the City's 2025 GP (City of Riverside 2007a), which is the document used by police services to evaluate service needs. The proposed SP that would be prepared for the project would not change the current use of the project site. It is anticipated that the project site can be adequately served by existing police services in the City. Priority 1 calls are typically of a life-threatening nature, such as a robbery in process or an accident involving bodily injury (City of Riverside 2007b). Police officers strive to respond within 7 minutes to Priority 1 calls. The project would not build any housing and therefore would not increase the population of the project area that would need police protection. Although the project would result in additional employees in the project area, the project is not expected to substantially increase emergency calls to the City's Police Department. The proposed project is not expected to result in new facilities that would be needed to serve the proposed project. Therefore, impacts are considered less than significant. The forthcoming EIR will not address this issue further.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c. Schools?	☐	☐	☒	☐
4.2.14c. Response *(Source: City of Riverside 2007b, Figure 5.13-2 and Table 5.13-D)*: The project site is located within the Riverside Unified School District. There are four existing or proposed schools within one-quarter mile of the proposed project. Grant Elementary School is located approximately 0.02 mile north of the site; a private elementary school and daycare facility is located at the corner of Terracina Drive and Magnolia Avenue, approximately 0.20 mile south of the project site; Central Middle School is located 0.13 mile southeast from the closest boundary of the project site, along Magnolia Avenue and Terracina Drive; and the Riverside City College campus core is located approximately 0.20 mile southeast of the project site. The Riverside City College baseball fields are located 0.09 mile southeast of the project site. The proposed project does not include new housing and would therefore not generate an increase in resident population requiring education facilities and services. Potential noise impacts to sensitive receptors such as schools will be addressed in the Noise section of the EIR. Impacts would be less than significant. This issue will not be addressed further in the forthcoming EIR.				
d. Parks?	☐	☐	☒	☐
4.2.14d. Response (*Source: Proposed Project*) The project does not propose residential uses and therefore would not be expected to result in an increased demand for parks. Nonetheless, the City's Park and Recreation Department request applicable fees to be paid to mitigate the potential impact to park development and open space needs generated by the project. Impacts are considered less than significant. This issue will not be addressed further in the forthcoming EIR.				
e. Other public facilities?	☐	☐	☒	☐
4.2.14e. Response: No other public facilities or services other than police and fire protection are anticipated to serve the proposed project. The existing hospital campus currently accommodates EMS and public service helicopters for community disaster preparedness. Implementation of the proposed project would continue to provide EMS and public service helicopters within the Riverside community and Inland Empire region as well as enhancing the hospital's overall capabilities to respond to mass casualty events and other life-threatening situations. Impacts are considered less than significant. This issue will not be addressed in the forthcoming EIR.				
4.2.15 Recreation				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
4.2.15a. Response *(Source: Proposed Project)*: The proposed project is the development of hospital bed towers, an approximately 100,000-square-foot mixed-use building, medical office building, and other hospital-related facilities and infrastructure, as well as the demolition of some existing medical structures on the existing hospital campus. The proposed project would not include new homes or businesses that would increase the use of existing parks or recreational facilities and thus no deterioration of existing facilities would occur. Nonetheless, the City's Park and Recreation Department request applicable fees to be paid to mitigate the potential impact to park development and open space needs generated by the project. Impacts are less than significant. This issue will not be addressed in the forthcoming EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
4.2.15b. Response *(Source: Proposed Project)*: Please refer to response 4.2.15a. The proposed project is the development of new hospital bed towers, an approximately 100,000-square-foot mixed-use building, medical office buildings, and other hospital-related facilities and infrastructure, as well as the demolition of some existing medical structures on the existing hospital campus. The project does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, no impacts to recreational facilities that might have an adverse physical effect on the environment will result. This issue will not be addressed in the forthcoming EIR.				
4.2.16 Transportation/Traffic – Would the project:				
a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
4.2.16a. Response (*Source: Proposed Project)*: A traffic impact analysis is being prepared for the proposed project that will address consistency with the City's traffic and circulation policies. The traffic impact analysis will evaluate the circulation system with the development of the proposed project. The analysis of the circulation system, with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will include a traffic impact analysis that will address the project's consistency with the circulation system.				
b. Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
4.2.16b. Response *(Source: Proposed Project)*: A traffic impact analysis is being prepared that will address the possibility for congestion with the development of the proposed project. The analysis of the congestion management plan, with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will include a traffic impact analysis that will address the possibility for congestion with the development of the proposed project.				
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☒	☐	☐	☐
4.2.16c. Response *(Source: Proposed Project; City of Riverside 2007a, Figure PS-6)*: The project site is not located within an airport influence area. There is an existing helistop/helipad atop the hospital's parking structure along 14th Street. The forthcoming EIR will analyze the existing helipad's use and whether the new facilities proposed in the SP will alter the existing operating conditions. This issue will be addressed further in the forthcoming EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
4.2.16d. Response *(Source: Proposed Project)*: Existing access to the project site are along Magnolia Avenue, 14th Street, Brockton Avenue, and Tequesquite Avenue. An existing gate at one of the ingress/egress driveways along Brockton Avenue would be removed. Regional access is provided by State Route (SR) 91 and SR 60. Reconfiguration of the vehicular circulation on the project site, including the project's surface parking and parking structures, will be reviewed and approved by the City's engineers. The project does not include any design features that are not standard or that have hazardous design features. Since the existing access points to the site are not being changed as a result of the project, impacts are expected to be less than significant. This issue will not be addressed further in the forthcoming EIR.				
e. Result in inadequate emergency access?	☐	☐	☒	☐
4.2.16e. Response *(Source: Proposed Project)*: Existing access to the project site are along Magnolia Avenue, 14th Street, Brockton Avenue, and Tequesquite Avenue. Emergency access vehicles currently enter and exit the site via the access driveway on 14th Street, which will remain as the primary emergency access. Other emergency access could be from Magnolia Avenue and Brockton Avenue. No feature of the proposed project is expected to result in inadequate emergency access. Since the existing access to the project will remain and the emergency access point will not be affected by any of the proposed development in the SP, the project does have adequate emergency access. Additionally, through the City's site plan review, the City Fire Department would ensure that the structures on the site meet code requirements related to emergency access. Impacts are considered less than significant. This issue will not be further analyzed in the EIR.				
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☒	☐	☐	☐
4.2.16f. Response *(Source: RTA 2013; City of Riverside 2007d)*: Extensive bus service throughout the City is provided by the Riverside Transit Agency (RTA). There are bus stops located along Magnolia Avenue and Brockton Avenue near the project site. The City has a Bicycle Master Plan that serves to develop a feasible plan for an interconnected on-street and off-street bicycle lane network throughout the City. As shown on Figure 6-1 of the City's Bicycle Master Plan (City of Riverside 2007d), there is an existing bike lane along Magnolia Avenue and future bike routes/lanes are proposed along 14th Street and Brockton Avenue. A traffic impact analysis is being prepared that will address consistency with adopted policies, plans, or programs regarding public transit and bicycle and pedestrian facilities. The analysis of the alternate modes of transportation including public transit and bicycle and pedestrian facilities, with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. This issue will be discussed in the forthcoming EIR.				
4.2.17 Utilities and Service Systems – Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
4.2.17a. Response *(Source: City of Riverside 2007b, Section 5.16 – Figure 5.16-5; 2010)*: Wastewater facilities would be provided by the City sewer system. Wastewater from the site would be treated at the City's Wastewater Treatment Plant located at the Regional Water Quality Control Plant. The primary sources of pollutants to stormwater from the proposed project are construction and demolition activities and runoff from roofs and parking lots. The City's Public Works Department will review the proposed project to ensure that the project is in compliance with the City's Wastewater Integrated Master Plan (City of Riverside 2010). Since the project will discharge its wastewater to a facility that is legally required to meet wastewater standards, impacts are considered less than significant. This issue will not be analyzed further in the forthcoming EIR.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
4.2.17b. Response *(Source: City of Riverside 2007b, 5.16; 2010)*: The proposed project is not expected to require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities that would cause significant environmental effects. The proposed project will be required to connect to existing water and wastewater infrastructure to provide the necessary construction and water/sewer needs for the project. The project would connect to existing water and sewer lines adjacent to the project site. The connection point for the lines would be from lines within existing adjacent roadways (Magnolia Avenue and Brockton Avenue). No new water and sewer infrastructure is anticipated as the existing infrastructure for the existing hospital campus would be able to accommodate the components of the proposed project. Thus, the proposed project would not result in significant environmental effects. Furthermore, the City's Public Works Department will review the proposed project to ensure that the project is in compliance with the City's Wastewater Integrated Master Plan (City of Riverside 2010). Impacts are considered less than significant. Therefore, water and wastewater facilities will not be discussed in the forthcoming EIR.				
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
4.2.17c. Response *(Source: City of Riverside 2007b, Figure 5.16-2)*: An existing City-owned storm drain is located along Magnolia Avenue and existing County-owned storm drains are located along Brockton Avenue and Tequesquite Avenue. The proposed project will connect to the existing stormwater drainage facilities to provide the necessary drainage for the project. The proposed project will also be required to comply with all rules, regulations, and other requirements of the City for use of stormwater facilities. A water quality management plan will be prepared and analyzed in the EIR. While no significant stormwater drainage facility impacts are anticipated, further detailed analysis will be performed. The analysis of the stormwater drainage facilities, with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, stormwater drainage facilities will be discussed in the forthcoming EIR.				
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
4.2.17d. Response *(Source: City of Riverside 2007b, Figure 5.16-3 and Figure 5.16-4; 2013)*: The project site is located within the City's Public Utilities service area. Water facilities for the existing hospital campus are provided by the City's Public Utilities Department. The water supply assessment letter dated June 10, 2013, by the City of Riverside's Interim Utilities Assistant General Manager concluded that there would be ample water supply to serve the project. Impacts are considered less than significant. Therefore, this issue will not be discussed in the forthcoming EIR.				
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
4.2.17e. Response *(Source: City of Riverside 2007b, Figure 5.16-5 and Figure 5.16-6; Kimley-Horn and Associates Inc. 2013)*: The project site is located within the City's Public Works sewer service area. Wastewater from the project site is currently treated at the City's Wastewater Treatment Plant located at the Regional Water Quality Control Plant and will continue to be treated at the City's Wastewater Treatment Plant with implementation of the proposed project. The sanitary sewer capacity study prepared by Kimley-Horn and Associates Inc. dated May 31, 2013, concluded that each of the project phases would be less than 75% of the full flow capacity of the City's sewer system, which is in compliance with the City's design standards. Therefore, the City would have adequate capacity to serve the project's projected wastewater demands. Impacts are considered to be less than significant. This issue will not be discussed further in the forthcoming EIR.				
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒	☐	☐	☐
4.2.17f. Response *(Source: City of Riverside 2007b, Table 5.16-A)*: The amount of solid waste generated during construction and demolition activities and operation of the proposed project is expected to be within the permitted capacity of nearby landfills through 2023. The analysis of the project's solid waste disposal needs including landfill service area after Year 2023 to accommodate Phase II of the project's construction and demolition activities as well as operation of the project, with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will provide details regarding how the project's solid waste will be disposed.				
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☒	☐	☐	☐
4.2.17g. Response *(Source: Proposed Project, Hazardous Materials and Waste Management Plan)*: The analysis of the federal, state, and local statutes and regulations related to solid waste, with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. Therefore, the forthcoming EIR will discuss the existing Hazardous Materials and Waste Management Plan and the updated Hazardous and Waste Management Plan, which would incorporate waste produced from project operation; identify the solid waste provider; and discuss how the Hazardous and Waste Management Plan and solid waste provider comply with federal, state, and local statutes regarding solid waste.				
4.2.18 Mandatory Findings of Significance				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or an endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
4.2.18a. Response *(Source: Proposed Project)*: The project site is currently developed with an existing hospital campus. The proposed project would occur within the existing hospital campus and thus would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or an endangered plant or animal. Based on evaluation and discussions contained in this Initial Study, the proposed project would potentially result in significant impacts to the following: aesthetics, air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation/traffic, and utilities/service systems. These environmental concerns will be analyzed in the forthcoming EIR and mitigation will be presented as appropriate.				

Issues (and Supporting Information Sources)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
4.2.18b. Response *(Source: Proposed Project)*: See response 4.2.18a. The forthcoming EIR will address the contribution of the proposed project to any cumulative impacts previously identified.				
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐
4.2.18c. Response *(Source: Proposed Project)*: Based on the analysis of all of the above questions, it has been determined that there would be potentially significant adverse effects on human beings. The analysis of the proposed project's potential for environmental effects that can cause substantial adverse effects on human beings, with the potential for feasible mitigation measures, requires additional study and analysis and therefore is considered potentially significant until it can be analyzed fully in the EIR. This issue will be analyzed in the forthcoming EIR.				

5.0 REFERENCES

14 CCR (California Code of Regulations) 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

24 CCR. California Building Code.

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Proposed Riverside Community Hospital Expansion Project Specific Plan and Environmental Impact Report - Initial Study Mailing List						
FIRST NAME	**LAST NAME**	**COMPANY/ORGANIZATION**	**ADDRESS**	**CITY**	**STATE**	**ZIP**
		State Clearinghouse	1400 Tenth Street	Sacramento	CA	95814
Paul	Hamilton	Building Division, City of Riverside, CDD	3900 Main Street, 3rd Floor	Riverside	CA	92522
David	Welch	Real Property Services, City of Riverside, Development Department	3900 Main Street, 5th Floor	Riverside	CA	92522
Margaret	Albanese	Attn: Fire Prevention City of Riverside, Fire Department	3900 Main Street, 3rd Floor	Riverside	CA	92522
Randy	McDaniel	Project Manager, City of Riverside, Park and Recreation	6927 Magnolia Avenue, 2nd Floor	Riverside	CA	92506
Matt	Bates	Water Engineer, City of Riverside, Public Utilities	Mission Square Building, 3750 University Avenue, 4th Floor	Riverside	CA	92501
		Electrical Engineering, City of Riverside, Public Utilities	Mission Square Building, 3750 University Avenue, 4th Floor	Riverside	CA	92501
Summer	Delgado	Electrical Engineering, Sys. Planning City of Riverside, Public Utilities	Mission Square Building, 3750 University Avenue, 4th Floor	Riverside	CA	92501
Toni	Redman	Planning, City of Riverside, Public Utilities	Mission Square Building, 3750 University Avenue, 4th Floor	Riverside	CA	92501
Rob	VanZanten	City of Riverside, Public Works	3900 Main Street, 4th Floor	Riverside	CA	92522
Robert	Filiar	City of Riverside, Public Works Corp. Yard	8095 Lincoln Avenue	Riverside	CA	92504
Traci	Dose	Administrative Analyst Riverside Police Department	Magnolia Station 10540 Magnolia Avenue	Riverside	CA	92505
Nathan	Freeman	Downtown Project Area City of Riverside, Redevelopment Divison	3900 Main Street	Riverside	CA	92522
Mark S.	Ripley	Riverside Airport Director, City of Riverside, RMA	6951 Flight Road	Riverside	CA	92504
Chris	Cannon	Director of Environmental Mgmt, City of Los Angeles Harbor Department	PO Box 151 425 S. Palos Verdes Street	San Pedro	CA	90731
		Southern California Edison Company Local Governmental Affairs Land/Use Environmental Coordinator	2244 Walnut Grove Avenue	Rosemead	CA	921770
		Western Riverside County Regional Conservation Authority	3403 10th Street, Ste. 320 PO Box 1667	Riverside	CA	92502
Ilene	Kutzle	AT&T Substructure Desk At&T California	1265 Van Buren Blvd, Rm 180	Anaheim	CA	92807
		County of Riverside, Executive Office	4080 Lemon Street, 4th Floor	Riverside	CA	92501
Clara	Miramontes	Planning Manager, City of Perris	135 North D. Street	Perris	CA	92570
Keith	Alex	Downtown Area Neighborhood Alliance	4161 Glenwood Dr.	Riverside	CA	92501
Tracie	Dose	Riverside Polic Department	Magnolia Station 10540 Magnolia Avenue	Riverside	CA	92505
		Director of Development Services City of Rialto	150 S. Palm Avenue	Rialto	CA	92376
Janice	Penner	Downtown Association	3666 University Ave, Ste 100	Riverside	CA	92501
		Downtown Partnership	3666 University Ave, Ste 100	Riverside	CA	92501
Andrew	Markis	Divisions Coordinator, Greater Riverside Chambers of Commerce	3895 University Avenue	Riverside	CA	92501
Rosalyn	Squires	The Gas Company	9400 Oakdale Ave ML 9314	Chatsworth	CA	91313
John	Foster	Eastern Muni Water Dist.	PO Box 8300	Perris	CA	92572
Ellen	McPeters	Downtown Renaissance	3324 Brockton Avenue	Riverside	CA	92502
Cindy	Roth	Greater Riverside Chambers of Commerce	3985 University Avenue	Riverside	CA	92501
		Northwest Mosquito & Vector Control Dist.	1966 Compton Avenue	Corona	CA	92881
Scott	Walter Wheaton	Project Manager, The Gas Company	4495 Howard Avenue	Riverside	CA	92507
		Office of Planning and Research	1400 Tenth Street, PO Box 3044	Sacramento	CA	95812
		Northside Improvement Association	PO Box 244	Riverside	CA	92502

		At&T SAG (Street Address Guide)	4331 Communications Dr., Rm 2-W-074	Dallas	TX	75211
Bill	Kleese	Renovators	6475 Victoria Avenue	Riverside	CA	92506
Lorelle	Moe-Luna	Riverside Transit Agency	1825 Third Street	Riverside	CA	92507
Tom	Franklin	Riverside Transit Agency	1825 Third Street	Riverside	CA	92507
James L.	Buysse	Vice Chancellor, Riverside Community College	4800 Magnolia Avenue	Riverside	CA	92506
Orin	Williams	Riverside Unified School District	3070 Washington Street	Riverside	CA	92504
		Director of Planning, Riverside Unified School District	3070 Washington Street	Riverside	CA	92504
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Steve	Smith	South Coast Air Quality Management District	21865 Copley Drive	Diamond Bar	CA	91765
Jeff	Kraus	Executive Director, University/Neighborhood Governmental & Community Relations & Technology Collaboration University California Riverside	3108 Hinderaker Hall	Riverside	CA	92521
Rafig	Ahmed	Department of Toxic Substances Control	5796 Corporate Avenue	Cypress	CA	90630
Glenn	Robertson	Water Quality Control Board, Santa Ana Region (8)	3737 Main Street, #500	Riverside	CA	92501
		Regional Planning Programs Section Water Quality Control	3737 Main Street, #500	Riverside	CA	92501
Joseph	Ontiveros	Cultural Resources Manager, Soboba Band of Luiseno Indians	PO Box 487	San Jacinto	CA	92581
Brian	Pearcy	3890 Tenth Street, 3rd Floor	PO Box 1583	Riverside	CA	92502
Franklin A.	Dancy	Director of Planning, Morongo Band of Mission Indians	12700 Pumarra Rd	Banning	CA	92220
		Governor's Office of Planning and Research	1400 10th Street	Sacramento	CA	95812
		Western Riverside County Regional Conservation Authority Riverside Centre Building	3403 10th Street, Ste. 320	Riverside	CA	92501
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Rebecca	DeLeon	Environmental Planning Team The Metropolitan Water District of So. CA	700 N. Alameda Street, US3-230	Los Angeles	CA	90012
		Calvary Presbyterian Church	4495 Magnolia Avenue	Riverside	CA	92501
Dr. M.C.	Hall	Coordinator Eastern Information Center Attn: Rachel Jacobus c/o Dept. of Anthropology	University of California, Riverside	Riverside	CA	92521
		Crescent Comprehensive Manager	2500 E Hall Rd. 210	Anaheim	CA	92806
		V & Prabha Dhalla	4343 Market St.	Riverside	CA	92501
		Community Investments 2 LLC	4343 Market St.	Riverside	CA	92501
Ruth	Tetley		5649 Pickering Ave	Whittier	CA	90601
		Riverside County Board of Education	4015 Lemon St.	Riverside	CA	92501
		Community Works Leasing Group	4649 Brockton Ave	Riverside	CA	92506
		Riverside County Board of Education	PO Box 868	Riverside	CA	92502
		Riverside Laser Specialists	4605 Brockton Ave 100	Riverside	CA	92506
		Clinton Randolph	4468 Brockton Ave	Riverside	CA	92501
Dwight J and Kathleen	Sloan		17951 Iris Ave	Riverside	CA	92508
		Eremia	1572 Jessamyn Ct	Riverside	CA	92506
Joel D. and Chingying	Doughten		11356 Waterleaf Ct	Riverside	CA	92505
		American Textile Maintenance	1667 W Washington Blvd	Los Angeles	CA	90007
Betsy Shea			PO Box 1502	Nashville	TN	37202
		Eden Lutheran Church of Riverside	4725 Brockton Ave	Riverside	CA	92506
		Riverside Community Players	4026 14th St.	Riverside	CA	92501
		Occupant	4395 Market St	Riverside	CA	92501
		Occupant	4344 Market St.	Riverside	CA	92501
		Occupant	4577 Brockton Ave	Riverside	CA	92501
		Occupant	4415 Brockton Ave	Riverside	CA	92501
		Occupant	4419 Brockton Ave.	Riverside	CA	92501
		Occupant	4435 Brockton Ave.	Riverside	CA	92501
		Occupant	4459 Brockton Ave.	Riverside	CA	92501
		Occupant	4489 Brockton Ave.	Riverside	CA	92501

		Occupant	4440 Brockton Ave.	Riverside	CA	92501
		Occupant	4407 Brockton Ave	Riverside	CA	92501
		Occupant	4381 Brockton Ave.	Riverside	CA	92501

Notice of Preparation

NOTICE OF PREPARATION

To: See Attached List

From/Lead Agency: Patricia Brenes, Senior Planner
City of Riverside
Community Development Department
Planning Division
3900 Main Street, Third Floor
Riverside, California 92522

Date: July 31, 2013

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Proposed Riverside Community Hospital Expansion Project

The City of Riverside will be the lead agency and will prepare an environmental impact report (EIR) for the proposed Riverside Community Hospital (RCH) Expansion Project (proposed project). We need to know your views or the views of your agency or organization as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. If applicable, your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project. The project description, location, and the potential environmental effects are contained in the attached materials. The City has prepared an Initial Study which is available at the City for review. Due to time limits mandated by state law, your response to this NOP must be submitted at the earliest possible date **but no later than 30 days** after receipt of this notice. Written comments on the NOP and on the contents of the forthcoming EIR should be submitted to the address above by August 30 2013.

Please send your response to Patricia Brenes, Senior Planner, at the address shown above. We will need the name for a contact person in your agency. If you have any questions, please contact Patricia Brenes at 951.826.5933 or via email at pbrenes@riversideca.gov.

Project Title: Riverside Community Hospital Expansion Project – Planning Cases P13-0207 (Environmental Impact Report), P13-0208 (General Plan Amendment); P13-0209 (Rezone); P13-0210 (Site Plan Review); and P13-0211 (Specific Plan)

Project Applicant: Jose Torres, Riverside Community Hospital

PROJECT SETTING

The approximately 22.5-acre project site is located at 4445 Magnolia Avenue in the City of Riverside, California. The site is bounded by 14th Street to the north, Brockton Avenue to the west, and Magnolia Avenue to the east. Evan's Park, Tequesquite Avenue, and residential development are located to the south (Figure 1, Regional Map; Figure 2, Vicinity Map; Figure 3, Site Map).

The project site is developed with an existing hospital campus owned and operated by Hospital

Corporation of America. The uses adjacent to the project site include residences to the northwest; Grant Elementary School and a gas station to the north; muffler services to the northeast; Newman Park and Community Medical Group of Riverside to the east; Riverside City College to the southeast; Calvary Presbyterian Church, Evans Park, and residences to the south; and commercial and industrial uses to the west.

PROJECT DESCRIPTION

RCH is proposing a new Specific Plan (SP) to guide future expansion plans on the RCH campus and clearly define the extent and location of future development on the RCH campus. A site master plan has been developed and includes both short-term and long-range planning goals, which cover construction over a 30-year period. The primary focus of Phase I of the proposed project is to construct a new hospital bed tower to alleviate seismic concerns associated with existing buildings and to meet seismic retrofit requirements as required by State Bill (SB) 1953. Phase II of the proposed project also addresses seismic concerns and includes future and possible long-range development.

Phase I of the proposed project, which includes the seven-story hospital bed tower, will be covered at a project level in the forthcoming EIR. The SP/EIR will provide the analysis needed by the City to consider approval of the development of the first tower in order for RCH to be compliant with SB 1953.

Because not all facilities of the proposed project are moving forward at this time and specific development plans are not available due to funding and market conditions, Phases IIa, IIb, and IIc will be analyzed in the forthcoming SP/EIR at a programmatic level. For Phase II, the SP/EIR will provide a general assessment of potential impacts, and provide a framework of how impacts and mitigation will be addressed in the future when those components of the project are submitted to the City for consideration. Phase I and Phase II of the proposed project are described in below.

Phase I – 2014 to 2017

Phase I of the SP will focus on a new, 251,500-square-foot, seven-story hospital bed tower addition that will house up to 105 new beds with 35 intensive care patient rooms and 70 medical and surgical patient rooms to accommodate families, and will expand its service offerings to more critically ill patients, a laboratory, and food services operations. This would bring the total bed count on the hospital campus to approximately 478. The hospital bed tower would also accommodate the relocation of acute care services such as dietary and laboratory services currently housed in Building A, which is not compliant with SB 1953. The hospital currently employs approximately 1,960 employees. 187 employees will relocate from Building A (119 laboratory employees and 68 dietary employees) to the new Phase I hospital tower and an additional 330 estimated employees would be needed to serve the new tower, totaling approximately 2,290 employees campus-wide. During Phase I, Building A would be used for hospital administrative support.

Construction of the new hospital bed tower for Phase I would eliminate 69 parking spaces (see

Figure 1, Site Plan). The existing Building N medical office building would be proposed for demolition under Phase I to accommodate the new hospital bed tower. Building N would already be vacant prior to demolition as the physicians/staff members would be relocated to the new Building P (which will be completed in March 2014 under the baseline/existing conditions). Also included in Phase I, Building B is proposed for a full seismic upgrade, including new windows as a result of the retrofit.

Phase II – 2017 to 2043

During Phase II of the proposed project, it is anticipated that several new structures would be constructed on the existing 22.5-acre hospital campus over a 30-year period. Phase II would be broken down into subphases: Phase IIa, Phase IIb, and Phase IIc.

Phase IIa – 2017 to 2024

Phase IIa would occur between 2017 and 2024 and would consist of the demolition of Building A, since it is not in compliance with SB 1953 and thus can no longer house acute care services. An approximately 100,000-square-foot mixed-use building is proposed on the Building A site. Also, the build out of the shell space (84 additional beds) in the Phase I tower would most likely occur during this phase (or earlier if necessary). Once the tower and other structures are built, the maximum bed capacity on campus would be 562 beds. Additional surface or structured parking is also anticipated in this Phase.

Phase IIb – 2024 to 2029

Phase IIb would occur between 2024 and 2029 and would consist of a second new, estimated eight-story, 600,000+-square-foot replacement bed tower, totaling 339 beds (273 beds relocated from Building B and 66 beds relocated from Building D to the proposed replacement bed tower after the seismic upgrades are complete under Phase I). The relocation of 339 beds would keep the number of beds on campus at 562. Phase IIb focuses on relocating beds and acute care services out of Building B and Building D to the new second tower, as those buildings are no longer in compliance with SB 1953. Once the beds are relocated to the new second hospital bed tower, Building B and Building D will be used for outpatient, skilled nursing, support, and education (University of California, Riverside Program Space). Phase IIb includes the demolition of the existing parking structures (identified as I and J on Figure 3, Site Plan) prior to the construction of the Phase IIb replacement bed tower. Some additional convenience parking could be included during this phase.

Phase IIc – 2030 to 2043

Phase *IIc would occur between 2030 and 2043 and is expected to include the following:*

- Addition of 38 beds, to take the campus-wide total to 600 beds (this could occur in Phase IIb if need is demonstrated prior to 2030)
- Construction of ancillary services as necessary

- Construction of surface or structured parking as needed to support growth.

Long-range development as part of Phase IIc of the proposed project could include future acute care expansions, parking structures, or other ancillary uses, including, but not limited to:

- Acute care services
- Central utility plants
- Medical office buildings and clinics
- Outpatient services buildings
- Education centers
- Dental clinics
- Imaging centers
- Pharmacies
- Wellness centers
- Physical therapy or rehabilitation centers
- Community centers
- Optometry services
- Medical retail (medical supplies)
- Off-site street parking, parking structures, or surface parking lots
- Hotel facilities.

ISSUES OF CONCERN

For the proposed project, issues of concern include potentially significant impacts to aesthetics, air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, land use and planning, noise, transportation/traffic, utilities/service systems, energy conservation, cumulative impacts, and growth-inducing impacts. These issues will be addressed in the forthcoming Draft EIR.

Signature: _____
Title: Patricia Brenes, Senior Planner

Attachments:
Figure 1

DUDEK

7824-01

SOURCE: Kimley-Horn and Associates 5/20/2013, Perkins+Will 5/20/2013, BING 2013

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

FIGURE 1

Site Plan

Path: Z:\Projects\7824\01\MAPDOC\MAPS\Figure1_SitePlan.mxd

Notice of Preparation Comment Letters

DEPARTMENT OF TRANSPORTATION
DISTRICT 8
PLANNING (MS 1221)
464 WEST 4th STREET, 6th Floor
SAN BERNARDINO, CA 92401-1400
PHONE (909) 383-4557
FAX (909) 383-6890
TTY (909) 383-6300
www.dot.ca.gov/dist8

Flex your power!
Be energy efficient!

August 15, 2013

Patricia Brenes
City of Riverside
Planning Department
3900 Main Street, Third Floor
Riverside, CA 92522

Notice of Completion and Environmental Document Transmittal SCH# 2013071102 (Riv 91PM 19.91)

Ms. Brenes,

We have completed our review for the above mentioned proposal for future expansion plans on the Riverside Community Hospital campus. Whereas a master plan has been developed and includes both short-term and long-range planning goals that cover construction on the RCH campus over 30-year period.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. As the responsible agency under the California Environmental Quality Act (CEQA), it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the City of Riverside due to the Project's potential impact to State facilities it is also subject to the policies and regulations that govern the SHS.

We recommend the following to be provided:

Traffic Study

- A Traffic Impact Study (TIS) is necessary to determine this proposed project's near-term and long-term impacts to the State facilities and to propose appropriate mitigation measures. The study should be based on Caltrans' *Guide for the Preparation of Traffic Impact Studies (TIS)* which is located at the following website:

http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

Minimum contents of the traffic impact study are listed in Appendix "A" of the TIS guide.

- The data used in the TIS should not be more than 2 years old.

- The geographic area examined in the traffic study should include as a minimum all regionally significant arterial system segments and intersections, including State highway facilities where the project will add over 100 peak hour trips. State highway facilities that are experiencing noticeable delays should be analyzed in the scope of the traffic study for projects that add 50 to 100 peak hour trips.

- Traffic Analysis Scenarios should clearly be exhibited as exiting, existing + project, existing + project + cumulative, and existing + project + cumulative + ambient growth.

- Caltrans endeavors that any direct and cumulative impacts to the State highway system be eliminated or reduced to a level of insignificance pursuant to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) standards.

  - The LOS for operating State highway facilities is based upon Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadway segments, and intersections is "D". For undeveloped or not densely developed locations, the goal may be to achieve LOS "C".

- Clearly indicate LOS with and without improvements.

  - It is recommended that the Synchro Analysis includes all intersections from the Project site to the proposed study areas. A PHF of 0.92 in urban areas is recommended to be used in the Synchro Analysis.

  - All freeway entrance and exit ramps where a proposed project will add a significant number of peak-hour trips that may cause any traffic queues to exceed storage capacities should be analyzed. If ramp metering is to occur, a ramp queue analysis for all nearby Caltrans metered on-ramps is required to identify the delay to motorists using the on-ramps and the storage necessary to accommodate the queuing. The effects of ramp metering should be analyzed in the traffic study. For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

- Proposed improvements should be exhibited in preliminary drawings that indicate the LOS with improvements.

- **Submit a hard copy of all Traffic Impact Analysis documents and an electronic Synchro Analysis file.**

We appreciate the opportunity to offer comments concerning this project. If you have any questions regarding this letter, please contact Talvin Dennis at (909) 383-6908 or myself at (909) 383-4557 for assistance.

Sincerely,

DANIEL KOPULSKY
Office Chief
Community and Regional Planning

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

July 31, 2013

To: Reviewing Agencies

Re: Riverside Community Hospital Expansion Project
SCH# 2013071102

Attached for your review and comment is the Notice of Preparation (NOP) for the Riverside Community Hospital Expansion Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Patricia Brenes
City of Riverside
3900 Main Street, 3rd Floor
Riverside, CA 92522

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2013071102
Project Title Riverside Community Hospital Expansion Project
Lead Agency Riverside, City of

Type NOP Notice of Preparation

Description RCH is proposing a new Specific Plan to guide future expansion plans on the RCH campus and clearly define the extent and location of future development on the RCH campus. A site master plan has been developed and includes both short-term and long-range planning goals that cover construction on the RCH campus over a 30-year period. The primary focus of Phase I of the proposed project is to construct a new hospital bed tower to alleviate seismic concerns associated with existing buildings and to meet seismic retrofit requirements as required by State Bill 1953. Phase II of the proposed project also addresses seismic concerns and includes future and possible long-range development.

Lead Agency Contact

Name Patricia Brenes
Agency City of Riverside
Phone 951 826 5933 **Fax**
email
Address 3900 Main Street, 3rd Floor
City Riverside **State** CA **Zip** 92522

Project Location

County Riverside
City Riverside
Region
Cross Streets Magnolia Avenue and 14th Street
Lat / Long 33° 58' 35" N / 117° 22' 53" W
Parcel No. Various
Township 2S **Range** 5W **Section** 23 **Base**

Proximity to:

Highways SR-91, 60
Airports Flabob
Railways Amtrack/Metrolink
Waterways Santa Ana River
Schools Grant ES
Land Use Hospital/DSP-HC - Downtown Specific Plan - Health Care District/Downtown Specific Plan

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse

Reviewing Agencies Resources Agency; Department of Conservation; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 6; Office of Emergency Management Agency, California; Native American Heritage Commission; Public Utilities Commission; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 8; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 8; Statewide Health Planning

Date Received 07/31/2013 **Start of Review** 07/31/2013 **End of Review** 08/29/2013

NOP Distribution List

County: Riverside

SCH# 2013071102

Resources Agency

- [x] Resources Agency
  Nadell Gayou
- [ ] Dept. of Boating & Waterways
  Nicole Wong
- [ ] California Coastal Commission
  Elizabeth A. Fuchs
- [ ] Colorado River Board
  Gerald R. Zimmerman
- [x] Dept. of Conservation
  Elizabeth Carpenter
- [ ] California Energy Commission
  Eric Knight
- [ ] Cal Fire
  Dan Foster
- [ ] Central Valley Flood Protection Board
  James Herota
- [x] Office of Historic Preservation
  Ron Parsons
- [x] Dept of Parks & Recreation
  Environmental Stewardship Section
- [ ] California Department of Resources, Recycling & Recovery
  Sue O'Leary
- [ ] S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- [x] Dept. of Water Resources Resources Agency
  Nadell Gayou

Fish and Game

- [ ] Dept. of Fish & Wildlife
  Scott Flint
  Environmental Services Division
- [ ] Fish & Wildlife Region 1
  Donald Koch
- [ ] Fish & Wildlife Region 1E
  Laurie Harnsberger
- [ ] Fish & Wildlife Region 2
  Jeff Drongesen
- [ ] Fish & Wildlife Region 3
  Charles Armor
- [ ] Fish & Wildlife Region 4
  Julie Vance
- [ ] Fish & Wildlife Region 5
  Leslie Newton-Reed
  Habitat Conservation Program
- [x] Fish & Wildlife Region 6
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] Fish & Wildlife Region 6 I/M
  Brad Henderson
  Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Wildlife M
  George Isaac
  Marine Region

Other Departments

- [ ] Food & Agriculture
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] Depart. of General Services
  Public School Construction
- [ ] Dept. of General Services
  Anna Garbeff
  Environmental Services Section
- [ ] Dept. of Public Health
  Jeffery Worth
  Dept. of Health/Drinking Water
- [ ] Delta Stewardship Council
  Kevan Samsam

Independent Commissions,Boards

- [ ] Delta Protection Commission
  Michael Machado
- [x] Cal EMA (Emergency Management Agency)
  Dennis Castrillo
- [x] Native American Heritage Comm.
  Debbie Treadway
- [x] Public Utilities Commission
  Leo Wong
- [ ] Santa Monica Bay Restoration
  Guangyu Wang
- [ ] State Lands Commission
  Jennifer Deleong
- [ ] Tahoe Regional Planning Agency (TRPA)
  Cherry Jacques

Business, Trans & Housing

- [x] Caltrans - Division of Aeronautics
  Philip Crimmins
- [ ] Caltrans - Planning
  Terri Pencovic
- [x] California Highway Patrol
  Suzann Ikeuchi
  Office of Special Projects
- [ ] Housing & Community Development
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- [ ] Caltrans, District 1
  Rex Jackman
- [ ] Caltrans, District 2
  Marcelino Gonzalez
- [ ] Caltrans, District 3
  Gary Arnold
- [ ] Caltrans, District 4
  Erik Alm
- [ ] Caltrans, District 5
  David Murray
- [ ] Caltrans, District 6
  Michael Navarro
- [ ] Caltrans, District 7
  Dianna Watson
- [x] Caltrans, District 8
  Dan Kopulsky
- [ ] Caltrans, District 9
  Gayle Rosander
- [ ] Caltrans, District 10
  Tom Dumas
- [ ] Caltrans, District 11
  Jacob Armstrong
- [ ] Caltrans, District 12
  Marlon Regisford

Cal EPA

Air Resources Board

- [ ] Airport/Energy Projects
  Jim Lerner
- [ ] Transportation Projects
  Douglas Ito
- [ ] Industrial Projects
  Mike Tollstrup
- [ ] State Water Resources Control Board
  Regional Programs Unit
  Division of Financial Assistance
- [ ] State Water Resources Control Board
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] State Water Resouces Control Board
  Phil Crader
  Division of Water Rights
- [x] Dept. of Toxic Substances Control
  CEQA Tracking Center
- [ ] Department of Pesticide Regulation
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] RWQCB 1
  Cathleen Hudson
  North Coast Region (1)
- [ ] RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] RWQCB 3
  Central Coast Region (3)
- [ ] RWQCB 4
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] RWQCB 5S
  Central Valley Region (5)
- [ ] RWQCB 5F
  Central Valley Region (5)
  Fresno Branch Office
- [ ] RWQCB 5R
  Central Valley Region (5)
  Redding Branch Office
- [ ] RWQCB 6
  Lahontan Region (6)
- [ ] RWQCB 6V
  Lahontan Region (6)
  Victorville Branch Office
- [ ] RWQCB 7
  Colorado River Basin Region (7)
- [x] RWQCB 8
  Santa Ana Region (8)
- [ ] RWQCB 9
  San Diego Region (9)

- [x] Other OSHPD
- [ ] _____
  Conservancy

Last Updated 01/08/2013

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH# 2013071102

Project Title: Riverside Community Hospital Expansion Project
Lead Agency: City of Riverside
Contact Person: Patricia Brenes
Mailing Address: 3900 Main Street, Third Floor
Phone: 951-826-5933
City: Riverside
Zip: 92522
County: Riverside

Project Location: County: Riverside
City/Nearest Community: Downtown Riverside
Cross Streets: Magnolia Avenue and 14th Street
Zip Code: 92501
Longitude/Latitude (degrees, minutes and seconds): 33 ° 58 ' 35 " N / 117 ° 22 ' 53 " W
Total Acres: 22.5
Assessor's Parcel No.: Various
Section: 23 Twp.: 2S Range: 5W Base: Riv West
Within 2 Miles: State Hwy #: SR-91; SR-60
Waterways: Santa Ana River
Airports: Flabob
Railways: Amtrack/Metrolink
Schools: Grant Elementary School

RECEIVED
JUL 31 2013
STATE CLEARING HOUSE

Document Type:

CEQA:
- [x] NOP
- [ ] Early Cons
- [ ] Neg Dec
- [ ] Mit Neg Dec
- [ ] Draft EIR
- [ ] Supplement/Subsequent EIR (Prior SCH No.) _____
- Other: _____

NEPA:
- [ ] NOI
- [ ] EA
- [ ] Draft EIS
- [ ] FONSI

Other:
- [ ] Joint Document
- [ ] Final Document
- [ ] Other: _____

Local Action Type:

- [ ] General Plan Update
- [x] General Plan Amendment
- [ ] General Plan Element
- [ ] Community Plan
- [x] Specific Plan
- [ ] Master Plan
- [ ] Planned Unit Development
- [x] Site Plan
- [x] Rezone
- [ ] Prezone
- [ ] Use Permit
- [ ] Land Division (Subdivision, etc.)
- [ ] Annexation
- [ ] Redevelopment
- [ ] Coastal Permit
- [ ] Other: _____

Development Type:

- [ ] Residential: Units _____ Acres _____
- [ ] Office: Sq.ft. _____ Acres _____ Employees _____
- [ ] Commercial: Sq.ft. _____ Acres _____ Employees _____
- [ ] Industrial: Sq.ft. _____ Acres _____ Employees _____
- [ ] Educational: _____
- [ ] Recreational: _____
- [ ] Water Facilities: Type _____ MGD _____
- [ ] Transportation: Type _____
- [ ] Mining: Mineral _____
- [ ] Power: Type _____ MW _____
- [ ] Waste Treatment: Type _____ MGD _____
- [ ] Hazardous Waste: Type _____
- [x] Other: Hospital

Project Issues Discussed in Document:

- [x] Aesthetic/Visual
- [x] Agricultural Land
- [x] Air Quality
- [x] Archeological/Historical
- [x] Biological Resources
- [ ] Coastal Zone
- [x] Drainage/Absorption
- [ ] Economic/Jobs
- [ ] Fiscal
- [x] Flood Plain/Flooding
- [x] Forest Land/Fire Hazard
- [x] Geologic/Seismic
- [x] Minerals
- [x] Noise
- [x] Population/Housing Balance
- [x] Public Services/Facilities
- [x] Recreation/Parks
- [x] Schools/Universities
- [x] Septic Systems
- [x] Sewer Capacity
- [x] Soil Erosion/Compaction/Grading
- [x] Solid Waste
- [x] Toxic/Hazardous
- [x] Traffic/Circulation
- [x] Vegetation
- [x] Water Quality
- [x] Water Supply/Groundwater
- [x] Wetland/Riparian
- [ ] Growth Inducement
- [x] Land Use
- [ ] Cumulative Effects
- [ ] Other: _____

Present Land Use/Zoning/General Plan Designation:
Hospital/ DSP-HC - Downtown Specific Plan - Health Care District/Downtown Specific Plan

Project Description: *(please use a separate page if necessary)*
See attached page.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2010

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

_____ Air Resources Board
_____ Boating & Waterways, Department of
_____ California Emergency Management Agency
_____ California Highway Patrol
_____ Caltrans District # _____
_____ Caltrans Division of Aeronautics
_____ Caltrans Planning
_____ Central Valley Flood Protection Board
_____ Coachella Valley Mtns. Conservancy
_____ Coastal Commission
_____ Colorado River Board
_____ Conservation, Department of
_____ Corrections, Department of
_____ Delta Protection Commission
_____ Education, Department of
_____ Energy Commission
X Fish & Game Region #6
_____ Food & Agriculture, Department of
_____ Forestry and Fire Protection, Department of
_____ General Services, Department of
_____ Health Services, Department of
_____ Housing & Community Development
X Native American Heritage Commission

X Office of Historic Preservation
_____ Office of Public School Construction
_____ Parks & Recreation, Department of
_____ Pesticide Regulation, Department of
_____ Public Utilities Commission
X Regional WQCB #6
_____ Resources Agency
_____ Resources Recycling and Recovery, Department of
_____ S.F. Bay Conservation & Development Comm.
_____ San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
_____ San Joaquin River Conservancy
_____ Santa Monica Mtns. Conservancy
_____ State Lands Commission
_____ SWRCB: Clean Water Grants
_____ SWRCB: Water Quality
_____ SWRCB: Water Rights
_____ Tahoe Regional Planning Agency
X Toxic Substances Control, Department of
_____ Water Resources, Department of

_____ Other: _____
_____ Other: _____

Local Public Review Period (to be filled in by lead agency)

Starting Date July 31, 2013 Ending Date August 30, 2013

Lead Agency (Complete if applicable):

Consulting Firm: Dudek
Address: 3685 Main Street, Suite 250
City/State/Zip: Riverside, CA 92501
Contact: Stephanie Standerfer
Phone: 951-300-2180

Applicant: Riverside Community Hospital/ Jose Torres
Address: 4445 Magnolia Avenue
City/State/Zip: Riverside, CA 92501
Phone: _____

Signature of Lead Agency Representative: _____ **Date:** 7/26/13

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Project Description

RCH is proposing a new Specific Plan (SP) to guide future expansion plans on the RCH campus and clearly define the extent and location of future development on the RCH campus. A site master plan has been developed and includes both short-term and long-range planning goals that cover construction on the RCH campus over a 30-year period. The primary focus of Phase I of the proposed project is to construct a new hospital bed tower to alleviate seismic concerns associated with existing buildings and to meet seismic retrofit requirements as required by State Bill (SB) 1953. Phase II of the proposed project also addresses seismic concerns and includes future and possible long-range development.

Phase I of the proposed project, which includes the seven-story hospital bed tower, will be covered at a project level in the forthcoming EIR. The SP/EIR will provide the analysis needed by the City to consider approval of the development of the first tower in order for RCH to be compliant with SB 1953.

Because not all facilities of the proposed project are moving forward at this time and specific development plans are not available due to funding and market conditions, Phases IIa, IIb, and IIc will be analyzed in the forthcoming SP/EIR at a programmatic level. For Phase II, the SP/EIR will provide a general assessment of potential impacts, and provide a framework of how impacts and mitigation will be addressed in the future when those components of the project are submitted to the City for consideration. Phase I and Phase II of the proposed project are described in below.

Phase I – 2014 to 2017

Phase I of the SP will focus on a new, 251,500-square-foot, seven-story hospital bed tower addition that will house up to 105 new beds with 35 intensive care patient rooms and 70 medical and surgical patient rooms to accommodate families, and will expand its service offerings to more critically ill patients, a laboratory, and food services operations. This would bring the total bed count on the hospital campus to approximately 478. The hospital bed tower would also accommodate the relocation of acute care services such as dietary and laboratory services currently housed in Building A, which is not compliant with SB 1953. The hospital currently employs approximately 1,960 employees. 187 employees will relocate from Building A (119 laboratory employees and 68 dietary employees) to the new Phase I hospital tower and an additional 330 estimated employees would be needed to serve the new tower, totaling approximately 2,290 employees campus-wide. During Phase I, Building A would be used for hospital administrative support.

Construction of the new hospital bed tower for Phase I would eliminate 69 parking spaces (see Figure 1, Site Plan). The existing Building N medical office building would be proposed for demolition under Phase I to accommodate the new hospital bed tower. Building N would already be vacant prior to demolition as the physicians/staff members would be relocated to the new Building P (which will be completed in March 2014 under the baseline/existing conditions). Also included in Phase I, Building B is proposed for a full seismic upgrade, including new windows as a result of the retrofit.

Phase II – 2017 to 2043

During Phase II of the proposed project, it is anticipated that several new structures would be constructed on the existing 22.5-acre hospital campus over a 30-year period. Phase II would be broken down into subphases: Phase IIa, Phase IIb, and Phase IIc.

Phase IIa – 2017 to 2024

Phase IIa would occur between 2017 and 2024 and would consist of the demolition of Building A, since it is not in compliance with SB 1953 and thus can no longer house acute care services. An approximately 100,000-square-foot mixed-use building is proposed on the Building A site. Also, the build out of the shell space (84 additional beds) in the Phase I tower would most likely occur during this phase (or earlier if necessary). Once the tower and other structures are built, the maximum bed capacity on campus would be 562 beds. Additional surface or structured parking is also anticipated in this Phase to support the new space.

Phase IIb – 2024 to 2029

Phase IIb would occur between 2024 and 2029 and would consist of a second new, estimated eight-story, 600,000+-square-foot replacement bed tower, totaling 339 beds (273 beds relocated from Building B and 66 beds relocated from Building D to the proposed replacement bed tower after the seismic upgrades are complete under Phase I). The relocation of 339 beds would keep the number of beds on campus at 562. Phase IIb focuses on relocating beds and acute care services out of Building B and Building D to the new second tower, as those buildings are no longer in compliance with SB 1953. Once the beds are relocated to the new second hospital bed tower, Building B and Building D will be used for outpatient, skilled nursing, support, and education (University of California, Riverside Program Space). Phase IIb includes the demolition of the existing parking structures (identified as I and J on Figure 1, Site Plan) prior to the construction of the Phase IIb replacement bed tower. Some additional convenience parking could be included during this phase.

Phase IIc – 2030 to 2043

Phase *IIc would occur between 2030 and 2043 and is expected to include the following:*

- Addition of 38 beds, to take the campus-wide total to 600 beds (this could occur in Phase IIb if need is demonstrated prior to 2030)
- Construction of ancillary services as necessary
- Construction of surface or structured parking as needed to support growth.

Long-range development as part of Phase IIc of the proposed project could include future acute care expansions, parking structures, or other ancillary uses, including, but not limited to:

- Acute care services
- Central utility plants
- Medical office buildings and clinics

- Outpatient services buildings
- Education centers
- Dental clinics
- Imaging centers
- Pharmacies
- Wellness centers
- Physical therapy or rehabilitation centers
- Community centers
- Optometry services
- Medical retail (medical supplies)
- Off-site street parking, parking structures, or surface parking lots
- Hotel facilities.

DUDEK

7824-01

SOURCE: Kimley-Horn and Associates 5/20/2013, Perkins+Will 5/20/2013, BING 2013

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

FIGURE 1
Site Plan

STATE OF CALIFORNIA
Edmund G. Brown, Jr., Governor
NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard
West Sacramento, CA 95691
(916) 373-3715
(916) 373-5471 – FAX
e-mail: ds_nahc@pacbell.net

RECEIVED
AUG 09 2013
RIVERSIDE CITY
COMMUNITY DEVELOPMENT DEPT.
PLANNING DIVISION

August 7, 2013

Ms. Patricia Brenes, Project Planner
City of Riverside
3900 Main Street, Third Floor
Riverside, CA 92522

RE: SCH#2013071102 CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the "**Riverside Community Hospital Expansion Project;**" located in Downtown Riverside; Riverside County, California

Dear Ms. Brenes:

The Native American Heritage Commission (NAHC) has reviewed the CEQA Notice regarding the above referenced project. In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

This project is also subject to California Government Code Sections 65040.2, 65352.3 *et seq.*

The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064.5(b). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

Contact the appropriate Information Center for a record search to determine :If a part or all of the area of project effect (APE) has been previously surveyed for cultural places(s), The NAHC recommends that known traditional cultural resources recorded on or adjacent to the APE be listed in the draft Environmental Impact Report (DEIR).

If an additional archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. We suggest that this be coordinated with the NAHC, if possible. The final report containing site forms,

site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure pursuant to California Government Code Section 6254.10.

A list of appropriate Native American Contacts for consultation concerning the project site has been provided and is attached to this letter to determine if the proposed active might impinge on any cultural resources. Lack of surface evidence of archeological resources does not preclude their subsurface existence.

Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, pursuant to California Health & Safety Code Section 7050.5 and California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities. Also, California Public Resources Code Section 21083.2 require documentation and analysis of archaeological items that meet the standard in Section 15064.5 (a)(b)(f). Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans. Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

Dave Singleton
Program Analyst

CC: State Clearinghouse

Attachment: Native American Contacts list

Native American Contacts
Riverside County
August 7, 2013

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resources Manager
P.O. Box 1477 Luiseno
Temecula , CA 92593
(951) 770-8100
pmacarro@pechanga-nsn.gov
(951) 506-9491 Fax

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

San Manuel Band of Mission Indians
Carla Rodriguez, Chairwoman
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

Soboba Band of Mission Indians
Rosemary Morillo, Chairperson; Attn: Carrie Garcia
P.O. Box 487 Luiseno
San Jacinto , CA 92581
carrieg@soboba-nsn.gov
(951) 654-2765
(951) 654-4198 - Fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

Santa Rosa Band of Mission Indians
John Marcus, Chairman
P.O. Box 391820 Cahuilla
Anza , CA 92539
(951) 659-2700
(951) 659-2228 Fax

Gabrielino Tongva Nation
Sandonne Goad, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
sgoad@gabrielino-tongva.com
951-845-0443

Morongo Band of Mission Indians
William Madrigal, Jr.,Cultural Resources Manager
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
(951) 201-1866 - cell
wmadrigal@morongo-nsn.gov
(951) 572-6004 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2013071102; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Riverside Community Hospital Expansion Project; located in Downtown Riverside; Riverside County, California.

Native American Contacts
Riverside County
August 7, 2013

San Manuel Band of Mission Indians
Daniel McCarthy, M.S.., Director-CRM Dept.
26569 Community Center. Drive Serrano
Highland , CA 92346
(909) 864-8933, Ext 3248
dmccarthy@sanmanuel-nsn.gov
(909) 862-5152 Fax

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad Cahuilla
Banning , CA 92220 Serrano
(951) 849-8807
(951) 755-5200
(951) 922-8146 Fax

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
P.O. Box 1477 Luiseno
Temecula , CA 92593
(951) 770-6100
hlaibach@pechanga-nsn.gov
(951) 695-1778 FAX

Serrano Nation of Mission Indians
Goldie Walker, Chairwoman
P.O. Box 343 Serrano
Patton , CA 92369

(909) 528-9027 or
(909) 528-9032

Cahuilla Band of Indians
Luther Salgado, Chairperson
PO Box 391760 Cahuilla
Anza , CA 92539
Chairman@cahuilla.net
760-763-5549
760-763-2631 - Tribal EPA

Pechanga Cultural Resources Department
Anna Hoover, Cultural Analyst
P.O. Box 2183 Luiseño
Temecula , CA 92593
ahoover@pechanga-nsn.gov
951-770-8104
(951) 694-0446 - FAX

Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road Serrano
Banning , CA 92220 Cahuilla
siva@dishmail.net
(951) 849-4676

SOBOBA BAND OF LUISENO INDIANS
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Luiseno
San Jacinto , CA 92581
jontiveros@soboba-nsn.gov
(951) 663-5279
(951) 654-5544, ext 4137

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2013071102; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Riverside Community Hospital Expansion Project; located in Downtown Riverside; Riverside County, California.

RECEIVED
AUG 07 2013
RIVERSIDE CITY
COMMUNITY DEVELOPMENT DEPT.
PLANNING DIVISION

MORONGO
BAND OF
MISSION
INDIANS

A SOVEREIGN NATION

August 2. 2013

Patricia Brenes, Senior Planner
City of Riverside
Community Development Department
Planning Division
3900 Main Street, Third Floor
Riverside, California 92522

SUBJECT: **Notice of Preparation of a Draft Environmental Impact Report for the Proposed Riverside Community Hospital Expansion Project Planning Cases P13-0207; P13-0208; P13-0209; P13-0210; and P13-0211**

Dear Ms. Brenes:

Thank you for contacting the Morongo Band of Mission Indians regarding the above referenced project. The Tribe greatly appreciates the opportunity to review the project and, respectfully, offer the following comments.

The project is outside of the Tribe's current reservation boundaries but within an area that may be considered a traditional use area or one in which the Tribe has cultural ties (e.g. Cahuilla/Serrano territory). Because the project involves a new Specific Plan to guide future expansion plans on the Riverside Community Hospital campus and clearly define the extent and location of future development over a 30-year period the Morongo Band of Mission Indians asks that you impose specific conditions regarding cultural and/or archaeological resources and buried cultural materials on any development plans or entitlement applications as follows:

- If human remains are encountered during grading and other construction excavation, work in the immediate vicinity shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5.

- In the event that Native American cultural resources are discovered during project development/construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.

  If significant Native American cultural resources are discovered, for which a Treatment Plan must be prepared, the developer or his

12700 PUMARRA ROAD BANNING, CA 92220 · 951-849-4697 FAX 951 849-4425

[1] The Morongo Band of Mission Indians realizes that there may be additional tribes claiming cultural affiliation to the area; however, Morongo can only speak for itself. The Tribe has no objection if the archaeologist wishes to consult with other tribes and if the city wishes to revise the condition to recognize other tribes.

archaeologist shall contact the Morongo Band of Mission Indians ("Tribe")[1]. If requested by the Tribe, the developer or the project archaeologist shall, in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.).

If I may be of further assistance with regard to this matter, please do not hesitate to contact me at your convenience.

Very truly yours.

MORONGO BAND OF MISSION INDIANS

Franklin A. Dancy

Franklin A. Dancy.
Director of Planning

Riverside Community Players

4026 Fourteenth Street, Riverside, California 92501

A NON-PROFIT CORPORATION • ESTABLISHED 1925

August 26, 2013

Patricia Brenes, Senior Planner
City of Riverside
Community Development Department
Planning Division
3900 Main Street, Third Floor
Riverside, CA 92522

Dear Patricia,

Enclosed is a copy of the "Notice of Preparation of a Draft Environmental Impact Report for the Proposed Riverside Community Hospital Expansion Project" that we received. Although you probably do not need yet another copy, I did want to make it easy for referencing our response regarding the concerns of Riverside Community Players. These concerns are also enclosed and should you have any questions, please do not hesitate to call. The telephone of the Administrative Office is (951) 369-1200 and the hours are 9:00 A.M. to 12:00 P.M., but the answering machine is always on as well. At this time there is a great deal of difficulty with our internet connection, so E-Mail may or may not arrive in any kind of a timely manner.

Thank you for your time and for allowing us the opportunity to express and explain our concerns regarding the Hospital expansion. As you will read in the response, these concerns are only over parking issues.

Sincerely,

Kathryn L. Gage
President – Board of Directors

RIVERSIDE COMMUNITY PLAYERS
Response to the

Riverside Community Hospital
Expansion Project
ENVIRONMENTAL IMPACT REPORT

First of all it was a surprise that there is no mention of Riverside Community Players in the area entitled 'Project Setting'. The theatre building, which has been at its present site since 1953, is located right at the side of one of the Hospital's main parking lots. There is an officially recorded document (334192) entitled "Easement and Covenants Agreement and Right of First Refusal Between Riverside Community Hospital and Riverside Community Players". This document was created at the time of the purchase by Riverside Community Players of the tract of land described in the document from Riverside Community Hospital. The date of the official recording is October 5, 1995.

Obviously, Riverside has much to gain from an improved and expanded hospital facility, and in the last few years Riverside Community Hospital (the Hospital) and Riverside Community Players (RCP) have had a nice working relationship. However, there are concerns that RCP has regarding the expansion. Included under section A in the portion entitled <u>ACCESS AND PARKING EASEMENTS</u> of the purchase agreement mentioned above, is the following:

> **...It is, however, understood and agreed that the fact that a portion of the Hospital Tract may at one time be paved and used as a driveway or parking area shall not prohibit subsequent construction of a building or other improvements on such area, provided that at least 150 parking spaces remain within the Hospital Tract or alternative real property with at least 100 of such spaces located within 300 feet of the Players Tract.**

Prior to the start of the Hospital's expansion project, RCP and the Hospital did have a meeting to discuss the construction plans, both current and future. The Hospital is aware of the above section of the agreement and indicated their plans to comply. If, indeed, the plans mentioned at the meeting are those still intended, it is these plans with which RCP has concerns. While the Hospital intends to provide the required parking spaces, it was indicated that those spaces will be located in the parking structure on Fourteenth Street closest to the Emergency entrance to the Hospital.

Although the spaces in this structure may literally be within the letter of the 300 feet in agreement (it is unknown if anyone has actually measured), having the parking in this location will provide significant difficulties to the patrons of RCP. Since it has always been the Senior demographic who have mainly supported RCP through many years of loyal season subscriptions, the Seniors remain the target audience for RCP. Having to park in a structure with multiple levels that is uphill from the theatre will present a great hardship to those who may not be in excellent physical condition, especially those with walkers. Parking is a major issue to the success of any business that relies on public attendance and if parking is difficult, the patrons will find other places to fulfill their needs, whether it be retail or, as in the case of RCP, theatrical performances. Without its patrons RCP cannot survive.

Since its inception in 1925, RCP has played an important and integral part in the lives of the residents of Riverside. As a non-profit organization since 1929 (now classified 501(c)(3)), run principally by volunteers, RCP has provided live entertainment to the community for 88 consecutive seasons, making it one of the oldest continuously performing community theatres in the United States.

Over its many years, RCP performed in many locations, and was finally able to purchase a building at 12th. & Almond. This was on school district property, and the renovated theatre was lost when the school district needed the land for a parking lot. At this time, in 1953, the City of Riverside owned the property on which the theatre now sits and an agreement was reached between the City and RCP to lease the land to RCP. The original 40 year lease was to be renewed in perpetuity, according to the memory of those who were around at the time. However, as these things happen, the City sold the land to the Hospital, which toward the end of the 40 year lease, advised RCP that the lease was not going to be renewed. After a few years of trying to raise money and find alternate places to relocate, and with much help from a few people, the Hospital sold the property to RCP. Enough money had been raised to pay cash for the land so RCP was able to remain debt free. It only took 70 years from the start, but finally RCP had a permanent home – owning not only the theatre building, but the land on which it sits. RCP was able to remain a major part of the quality of life Riverside offers.

The active role RCP plays in Riverside includes such things as providing programming for school children, offering opportunities for daytime field trips for students to see live theatre – often for the very first time in their lives. These Family Series plays all relate to stories from literature, encouraging the students to read by bringing literature to life. RCP has a Benefit Night program for fundraising events, wherein organizations can purchase all of the seats in the theatre for a very low price and sell the tickets at whatever price they choose. Meals on Wheels, the Assistance League, several service organizations, the International Relations Council all have Benefit Nights scheduled for the upcoming 2013/2014 season. This program has been so successful for the organizations that 18 of the 20 Benefit Nights available are already booked. Parking in the parking structure would also be a major issue for these events as well as for the regular patrons. A ticket package is provided to any organization that requests a donation for their silent auction at their fundraising event. Local high school seniors are honored through RCP's Vivienne Allbright Hughes High School Senior Award for excellence in theatre and a graduating theatre student from RCC is selected to receive the RCP Vivienne Allbright Hughes scholarship each year.

RCP is a member of the Riverside Downtown Partnership, the Greater Riverside Chambers of Commerce, participates in the Mayor's Ball (now Celebration) for the Arts & Innovation and is also part of the Mayor's CAP Committee. With diversity being such an important issue, it is worth noting that RCP is one of the very few, if not the only, community theatre that makes an effort to include diversity in its programming. As an example, over the last few years RCP has produced:

The Teahouse of the August Moon – story takes place in Okinawa following WWII
The Lilies of the Field – young African-American man meets up with some nuns
Anna in the Tropics – takes place in the 1920s at a Cuban cigar factory in Florida
Swift Fox – the true story of the Native American called Willie Boy
(done as a Readers Theatre production)
Intimate Apparel – about an African-American seamstress in 1905 New York
(to be done this season, 2013/2014)

All of the above explanation was provided in an effort to demonstrate what an important part RCP plays in Riverside's cultural activities. It would indeed be a travesty for a city that spent a great deal of effort to be designated a city of Arts and Innovation to allow an organization such as Riverside Community Players to be severely diminished or even totally destroyed over an issue of parking spaces. This is an issue that can certainly be remedied simply by leaving enough parking spaces where they already exist.

Thank you very much for your time and the opportunity to explain our concerns.

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

August 23, 2013

Patricia Brenes, Senior Planner
City of Riverside
Community Development Department, Planning Division
3900 Main Street, Third Floor
Riverside, CA 92522

Notice of Preparation of a CEQA Document for the
Riverside Community Hospital Expansion Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: www.aqmd.gov/ceqa/hdbk.html. SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/ceqa/handbook/signthres.pdf. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore,

when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at imacmillan@aqmd.gov or call me at (909) 396-3244.

Sincerely,

Ian V. MacMillan

Ian MacMillan
Program Supervisor, CEQA Inter-Governmental Review
Planning, Rule Development & Area Sources

RVC130802-05
Control Number

August 30, 2013

Attn: Patricia Brenes, Senior Planner
City of Riverside
Community Development Department
3900 Main Street, Third Floor
Riverside, CA 92522

Re: Notice of Preparation of a DEIR for the Proposed Riverside Community Hospital Expansion Project

The Soboba Band of Luiseño Indians appreciates your observance of Tribal Cultural Resources and their preservation in your project. The information provided to us on said project has been assessed through our Cultural Resource Department, where it was concluded that although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in close proximity to known village sites and is a shared use area that was used in ongoing trade between the Luiseño and Cahuilla tribes. Therefore it is regarded as highly sensitive to the people of Soboba.

Soboba Band of Luiseño Indians is requesting the following:

1. G**overnment to Government** consultation in accordance to SB18. Including the transfer of information to the Soboba Band of Luiseno Indians regarding the progress of this project should be done as soon as new developments occur.

2. Soboba Band of Luiseño Indians continues to act as a consulting tribal entity for this project.

3. Working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason the Soboba Band of Luiseño Indians requests that a Native American monitoring component be included as a mitigation measure for the Environmental Impact Report. The Tribe is requesting that a Treatment and Dispositions Agreement between the developer and The Soboba Band be provided to the City of Riverside prior to the issuance of a grading permit and before conducting any additional archaeological fieldwork

4. Request that proper procedures be taken and requests of the tribe be honored (Please see the attachment)

The Soboba Band of Luiseno Indians is requesting a face-to-face meeting between the City of Riverside and the Soboba Cultural Resource Department. Please contact me at your earliest convenience either by email or phone in order to make arrangements.

Sincerely,

Joseph Ontiveros
Cultural Resource Director
Soboba Band of Luiseño Indians
P.O. Box 487
San Jacinto, CA 92581
Phone (951) 654-5544 ext. 4137
Cell (951) 663-5279
jontiveros@soboba-nsn.gov

Cultural Items (Artifacts). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer should agree to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. When appropriate and agreed upon in advance, the Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

The Developer should waive any and all claims to ownership of Native American ceremonial and cultural artifacts that may be found on the Project site. Upon completion of authorized and mandatory archeological analysis, the Developer should return said artifacts to the Soboba Band within a reasonable time period agreed to by the Parties and not to exceed (30) days from the initial recovery of the items.

Treatment and Disposition of Remains.

A. The Soboba Band shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods shall be treated and disposed of with appropriate dignity.

B. The Soboba Band, as MLD, shall complete its inspection within twenty-four (24) hours of receiving notification from either the Developer or the NAHC, as required by California Public Resources Code § 5097.98 (a). The Parties agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes.

C. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The Soboba Band, as the MLD in consultation with the Developer, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains.

D. All parties are aware that the Soboba Band may wish to rebury the human remains and associated ceremonial and cultural items (artifacts) on or near, the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The Developer should accommodate on-site reburial in a location mutually agreed upon by the Parties.

E. The term "human remains" encompasses more than human bones because the Soboba Band's traditions periodically necessitated the ceremonial burning of human remains. Grave goods are those artifacts associated with any human remains. These items, and other funerary remnants and their ashes are to be treated in the same manner as human bone fragments or bones that remain intact.

Coordination with County Coroner's Office. The Lead Agencies and the Developer should immediately contact both the Coroner and the Soboba Band in the event that any human remains are discovered during implementation of the Project. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c).

Non-Disclosure of Location Reburials. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).
Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer agrees to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

City Planning Commission Workshop Minutes

CITY PLANNING COMMISSION MINUTES

THURSDAY, MAY 23, 2013, 9 A.M.
ART PICK COUNCIL CHAMBER, CITY HALL
3900 MAIN STREET

		PLANNING COMMISSIONERS									
		MANNING	STOSEL	TAVAGLIONE	PARKER	RIGGLE	WADE	ROSSOUW	KAIN	ZAKI	STOCKTON
	WARDS	1	2	3	4	5	6	7	CW 3	CW 3	CW 5
Roll Call:	Present	X	X	X	X	X	X		X	X	X
Chair Wade called the meeting to order at 9 a.m. with all members present except Commissioners Rossouw. The Pledge of Allegiance was given to the flag. PLANNING/ZONING MATTERS FROM THE AUDIENCE Letitia Pepper spoke regarding the issuance of building permits to convert single family homes into mini dormitories. **PUBLIC HEARINGS** PLANNING CASES P12-0663 and P12-0664 – 4103 Tyler Street CONTINUED Chair Wade announced that the applicant requested a continuance to the meeting of June 6, 2013. Following a brief discussion the Planning Commission continued Planning Cases P12-0663 and P12-0664 to the meeting of June 6, 2013.	Motion Second All Ayes			X					X		
PLANNING CASE P12-0089 – 3841 Park Avenue Proposal by Fiona Hilyer on behalf of Spectrum Surveying and Engineering to consider a Minor Conditional Use Permit to establish a 55-foot high Wireless Telecommunication Facility within an existing Church Cupola on an approximately 0.7 acre site developed with a religious institution. Comments from the audience: Maria Caballero inquired what the negative effects of the cell tower would be to the residents in the neighborhood. Reni Garza asked what the minor effects would be and if there would be any long term effects to the residents in the neighborhood. Following discussion the Planning Commission: 1) Determined that Planning Case P12-0089 will not have a significant effect on the environment based on the findings set forth in the case record and adopted a Negative Declaration; and 2) Approved Planning Cases P12-0089 based on the findings in the staff report and subject to the recommended conditions with the addition of a community workshop and a flyer shall be required to address the neighborhood's concerns regarding RF transmissions. The flyer should be bilingual (English/Spanish) and the workshop should be posted in the community prior to issuance of the building permit. PLANNING CASES P13-0060 and P13-0186 – 5160 Arlington Avenue Proposal by Andrew Mitchell on behalf of One Source Security to consider a Conditional Use Permit to allow for the installation of a stand-alone	Motion Second All Ayes					X			X		

		PLANNING COMMISSIONERS									
		MANNING	STOSEL	TAVAGLIONE	PARKER	RIGGLE	WADE	ROSSOUW	KAIN	ZAKI	STOCKTON
	WARDS	1	2	3	4	5	6	7	CW3	CW3	CW5
Automatic Teller Machine (ATM) with a drive-thru to replace an existing and abandoned photo booth with a drive-thru, and for the Design Review of plot plan and elevations for the proposed ATM, on an approximately 10.8 acre site currently developed with a retail commercial center (Heritage Plaza). Following discussion the Planning Commission recommended that the City Council: 1) Determine that the proposed project is exempt from CEQA review pursuant to Section 15301; 2) Approve Planning Cases P13-0060 and P13-0186 based on the findings outlined in the staff report subject to the recommended conditions with modification to conditions: 1) The ATM structure shall be sited towards the westerly end of the drive thru lane, and be oriented towards Arlington Avenue; and 2) The southern most of the two one-way drive thru lanes shall be removed and be fully landscaped.	Motion Second All Ayes			X		X					
PLANNING CASE P11-0372 – Zoning Code Amendment Proposal by the City of Riverside to consider an amendment to the Zoning Code (Title 19 of the Riverside Municipal Code) to allow by right, the rental of rooms within any single-family residence/dwelling to no more than two individuals per single-family residence/dwelling where the Zoning Code currently allows rental of rooms up to four individuals by right and to require a Room Rental Permit for rental of rooms to more than two individuals up to four individual renters subject to compliance with certain conditions of approval. Comments from the audience: Jill Johnson-Young, Wendy Eads, Ron Velasquez, and Jeff Kraus, spoke in favor of the proposed amendment. Suggestions were made by various people to include stronger enforcement tools with this amendment. Letitia Pepper and Paul Herrera spoke in opposition. Kevin Dawson spoke regarding the issuance of building permits to convert living space to dormitories in single family homes. Following discussion the Planning Commission recommended that the City Council: 1) Determine that the proposed project is exempt from CEQA review pursuant to Section 15301; 2) Approve Planning Case P11-0372 based on the findings outlined in the staff report subject to the recommended conditions, with the addition of a workshop on this matter within 60 days.	Motion Second	X									X
SUBSTITUTE MOTION: That Planning staff take today's comments and return to the Planning Commission with a complete amendment: Issues to include: the requirement of business license, ensuing code enforcement issues, parking plan requirement (parking ration 1-1), implementation of neighborhood meeting for the area prior to approval and address of property owner/manager to be included on application. Clarify that this applies to, not just room rental, but the building. MOTION	Motion					X					

		PLANNING COMMISSIONERS									
		MANNING	STOSEL	TAVAGLIONE	PARKER	RIGGLE	WADE	ROSSOUW	KAIN	ZAKI	STOCKTON
	WARDS	1	2	3	4	5	6	7	CW3	CW3	CW5
FAILED DUE TO LACK OF SECOND.											
SUBSTITUTE MOTION: To continue Planning Case P11-0372. Hold a workshop and include the various concerns identified today and pass on a complete amendment to the City Council. MOTION FAILED.	Motion								X		
	Second		X								
	Ayes		X		X				X	X	
	Noes	X		X		X	X				X
ORIGINAL MOTION: 1) Determine that the proposed project is exempt from CEQA review pursuant to Section 15301; 2) Approve Planning Case P11-0372 based on the findings outlined in the staff report subject to the recommended conditions, with the addition that the application is to contain the property owner and management company's contact information: name, address, phone number and email address. As part of their recommendation, the Planning Commission also requested a change to the Room Rental Permit application form to include the property owner and property management company's: name, address, phone number and email address. The Planning Commission also requested further study and amendment to this section of the Code to fully incorporate the concerns raised at the meeting. A workshop was requested on this matter within 60 days.	Motion										X
	Second	X									
	Ayes	X	X	X	X	X	X				X
	Noes								X		
	Abstain									X	

RECESS
The Planning Commission recessed at 10:58 a.m. and reconvened at 11:12 a.m. in the Art Pick Council Chamber with Chair Wade presiding and all commissioners present except Commissioners Rossouw and Tavaglione.

MISCELLANEOUS PLANNING AND ZONING ITEMS

WORKSHOP – PLANNING CASES P13-0207, P13-0208, P13-0209, P13-0210, P13-0211 – 4445 Magnolia Avenue
Presentation given by Patricia Brenes, Senior Planner. Comments from the audience: Cindy Roth, President Riverside Chamber of Commerce, spoke in support of the project. Robert Mease, spoke on behalf of Calvary Presbyterian Church, asked that the hospital keep in mind that the church is historically and architecturally significant as well, that any circulation and parking issues will have a significant impact to the church. Following discussion and without formal motion, the City Planning Commission made some suggestions and thanked the applicant for their presentation.

Commissioner Kain left at this time.

City of Arts & Innovation

CITY PLANNING COMMISSION MINUTES

THURSDAY, MAY 23, 2013, 9 A.M.
ART PICK COUNCIL CHAMBER, CITY HALL
3900 MAIN STREET

		PLANNING COMMISSIONERS									
		MANNING	STOSEL	TAVAGLIONE	PARKER	RIGGLE	WADE	ROSSOUW	KAIN	ZAKI	STOCKTON
	WARDS	1	2	3	4	5	6	7	CW3	CW3	CW5
WORKSHOP – PLANNING CASE P13-0198 and P13-0199 – 5797 Picker Street Presentation given by Moises Lopez, Associate Planner. Following discussion the City Planning Commission made some suggestions and took no formal action on Planning Cases P13-0198 and P13-0199.											
BRIEF REPORT FROM THE CITY PLANNER ON RECENT CITY COUNCIL ACTIONS AND MAJOR DEVELOPMENT PROJECTS Steve Hayes, City Planner, reported on the recent City Council actions. He asked the Commission to please notify staff if they would be unable to attend the June 6, 2013 meeting as it appeared there will only be 6 members present for the evening portion of the meeting.											
ITEMS FOR FUTURE AGENDAS There were no items for future agendas.											
MINUTES The May 9, 2013 Planning Commission Minutes were approved as presented.	All Ayes	X	X		X	X	X			X	X
ADJOURNMENT The meeting was adjourned at 12:30 p.m. to the meeting of June 6, 2013 at 9:00 a.m. in the Art Pick Council Chambers.											

APPENDIX B

Air Quality and Greenhouse Gas Reports

Air Quality Technical Report and Greenhouse Gas Emissions Analysis for the Riverside Community Hospital Specific Plan Expansion Project City of Riverside, California

Prepared for:

City of Riverside
Community Development Department
Planning Division
3900 Main Street, Third Floor
Riverside, California 92522

Prepared by:

DUDEK
3685 Main Street, Suite 250
Riverside, California 92501

JANUARY 2014

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AQMP	Air Quality Management Plan
ATCM	Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
BACT	best available control technology
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2E	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CUP	Conditional Use Permit
DSP-HC	Downtown Specific Plan–Health Care
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
GP	General Plan
GWP	global warming potential
HEPA	high-efficiency particulate arresting
LOS	level of service
LST	localized significance threshold
MMT	million metric ton(s)
Mpg	miles per gallon
Mph	miles per hour
MT	metric ton(s)
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
N_2O	nitrous oxide

NO	nitric oxide
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
O_3	ozone
OPR	Office of Planning and Research
PFCs	perfluorocarbons
PM_{10}	particulate matter 10 microns in diameter or less
$PM_{2.5}$	particulate matter 2.5 microns in diameter or less
RCH	Riverside Community Hospital
RTP	Regional Transportation Plan
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SO_x	sulfur oxides
SP	Specific Plan
SR	State Route
TAC	toxic air contaminant
T-BACT	best available control technology for toxics
UCR	University of California at Riverside
USGS	U.S. Geological Survey
VOC	volatile organic compound
W	watt(s)

EXECUTIVE SUMMARY

The proposed Riverside Community Hospital (RCH) Specific Plan Expansion Project (project) site is located within the City of Riverside (City) in the northwestern portion of Riverside County, California (Figure 1, Regional Map). The RCH campus currently occupies approximately 852,186 square feet of building area. RCH is proposing a new Specific Plan (SP) on the project site. A site master plan has been developed that includes both short-term and long-range planning goals that cover construction over a 30-year period. The primary focus of Phase I of the project is to construct a new hospital bed tower to alleviate seismic concerns associated with existing buildings and to meet seismic retrofit requirements as required by Senate Bill (SB) 1953. Phases IIa, IIb, and IIc of the project also address seismic concerns and include future and possible long-range development.

The air quality impact analysis evaluates the potential for significant adverse impacts to air quality due to construction and operational emissions resulting from the project. Construction of the project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling demolition debris and construction materials. Fugitive dust emissions would be minimized with the incorporation of standard construction measures and adherence with the South Coast Air Quality Management District's (SCAQMD's) rules and requirements.

The analysis concludes that daily construction emissions would not exceed the SCAQMD's emission-based significance thresholds for volatile organic compounds (VOC), carbon monoxide (CO), sulfur oxides (SO_x), particulate matter with an aerodynamic diameter less than or equal to 10 microns in diameter (PM_{10}), or particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in diameter ($PM_{2.5}$) during any of the construction years. The project, however, would exceed the daily construction emissions threshold for oxides of nitrogen (NO_x). The maximum 1-hour nitrogen dioxide (NO_2) and 24-hour PM_{10} and $PM_{2.5}$ modeled concentrations would exceed the SCAQMD localized significance thresholds (LSTs) for sensitive receptors at the hospital and in the vicinity of the project site. The 1- and 8-hour CO concentrations would not exceed the LSTs. Since construction of the project is anticipated to result in an exceedance of these LSTs, the project would result in significant air quality impacts during the construction phase. Operation of the project would produce VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from area sources, including space and water heating, stationary boilers and engines, and vehicular traffic to project land uses. The project would impact air quality through the vehicular traffic generated primarily by patients visiting the hospital and medical office facilities and physicians and staff who work there. The analysis, however,

concludes that the net change in daily operational emissions would not exceed the SCAQMD emission-based significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. Implementation of project features would further reduce project emissions of criteria pollutants, and the project's operational emissions would be **less than significant**.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases (GHGs). The California Natural Resources Agency (CNRA) has adopted statewide qualitative GHG emission thresholds of significance in Appendix G to the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). There are no statewide numeric GHG emission thresholds of significance. Furthermore, SCAQMD has not adopted any numeric GHG emission thresholds of significance for its air basin.[1] The SCAQMD has not considered thresholds for institutional projects such as this project. Further, the SCAQMD has not formally adopted these thresholds mentioned above. Therefore, the City has concluded that there are no numeric emissions-based thresholds by which the City could evaluate whether the project emissions would exceed a threshold of significance as indicated in Section 15064.4(b)(2) of the CEQA Guidelines. However, the estimated total GHG emissions generated during construction and operation of the project are discussed in this report for disclosure purposes. The estimated total GHG emissions generated during construction of Phase IIb of the project would be 1,806 MT CO_2E. The estimated net change of Phase IIb (includes Phase I and Phase IIa buildings) of the annual project-generated GHG emissions by 2030 and baseline conditions would be approximately 29,047 MT CO_2E per year as a result of project operations. The project would incorporate design strategies, such as energy-efficient lighting and water use reduction measures, which would reduce GHG emissions associated with electrical generation. Additionally, the project would incorporate transit accessibility, an improved pedestrian network, and ride share incentives to reduce GHG emissions associated with mobile sources.

At this time, since specific development plans are not known for Phase IIc of the project, potential Phase IIc air quality and GHG impacts will be analyzed qualitatively, and proposed mitigation measures will be applied to Phase IIc where applicable to ensure future assessment of the impacts of Phase IIc.

[1] The Bay Area Air Quality Management District (BAAQMD) has adopted numeric GHG emission thresholds of significance for the San Francisco Bay Area Air Basin. However, the thresholds were created specifically for conditions in the San Francisco Bay Area Air Basin, which are not applicable to the SCAQMD. Furthermore, the BAAQMD does not have jurisdiction over the project site in the SCAQMD.

Air Quality Technical Report and Greenhouse Gas Emissions Analysis for the Riverside Community Hospital Specific Plan Expansion Project

1.0 INTRODUCTION

1.1 Purpose

The purpose of this report is to evaluate the potential air quality impacts during construction and operation of the proposed Riverside Community Hospital (RCH) Specific Plan Expansion Project (project). It evaluates short-term (construction) and long-term (operational) impacts to air quality that would potentially occur as a result of implementation of the project. Impacts are evaluated for their significance based on the South Coast Air Quality Management District's (SCAQMD's) environmental thresholds of significance.

1.2 Project Location

The approximately 22.5-acre site is located at 4445 Magnolia Avenue in Riverside, California, approximately 0.42 mile west of State Route 91 (SR 91) and approximately 1.60 miles south of SR 60. The site is bounded by 14th Street to the north, Brockton Avenue to the west, and Magnolia Avenue to the east. Evans Sports Complex, Tequesquite Avenue, and residential development are located to the south (Figure 1, Regional Map; Figure 2, Vicinity Map; Figure 3, Site Plan).

The uses adjacent to the project site are residences to the northwest; Riverside Community Players Theatre, Grant Elementary School, and a gas station to the north; muffler services to the northeast; Newman Park and Community Medical Group of Riverside to the east; Riverside City College to the southeast; Calvary Presbyterian Church, Evans Sports Complex (athletic fields for Riverside City College), and residences to the south; and commercial and industrial uses to the west.

RCH consists of 12 Assessor's Parcel Numbers (217-070-027, 217-300-009, 217-300-018, 217-300-019, 217-060-024, 217-060-026, 217-060-027, 217-060-028, 217-300-011, 217-300-014, 217-300-015, and 217-111-048). The latitude and longitude of the approximate center of the site is 33°58′35″ N and 117°22′53″ W. The RCH site includes parts of Section 23 of Township 2 South, Range 5 West within the Riverside West 7.5-minute quadrangle, as mapped by the U.S. Geological Survey (USGS).

The project site is located within the South Coast Air Basin (SCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Sources of air pollutants within the SCAB are under the jurisdiction of the SCAQMD. The SCAQMD regulates stationary sources of pollution throughout its jurisdictional area. Direct emissions from motor vehicles are regulated by the California Air Resources Board (CARB).

1.3 Project Background

The project site is developed with an existing hospital campus owned and operated by an affiliate of Hospital Corporation of America.

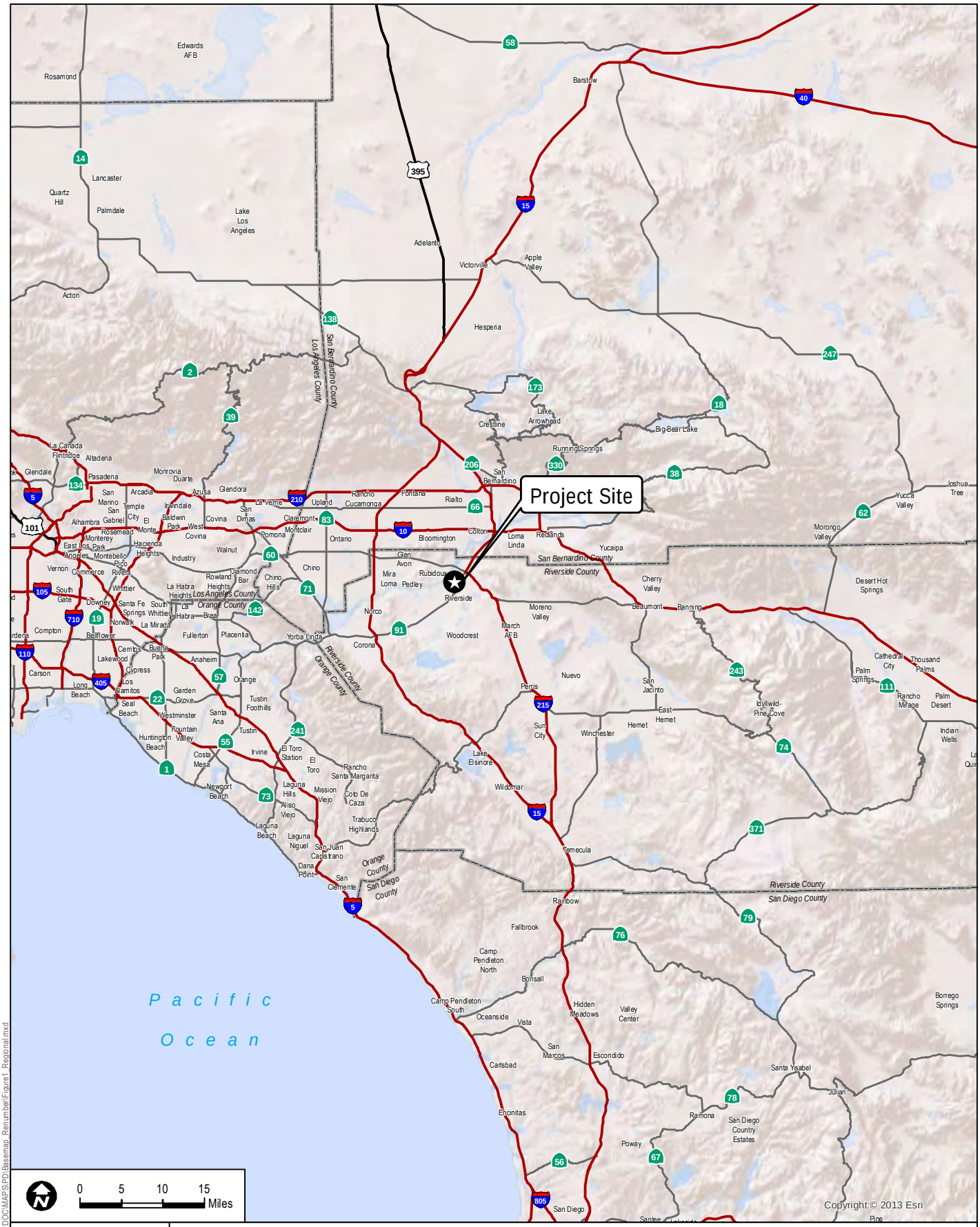
Previous Approvals / History of Project Changes

RCH currently operates under a Conditional Use Permit (CUP) that dates back to the 1960s and is consistent with the Downtown Specific Plan–Health Care (DSP-HC) District. Under the DSP-HC District, hospitals are permitted with a CUP. Current RCH campus buildings, including years constructed, are listed in Table 1, Existing Riverside Community Hospital Uses on Site, and depicted on Figure 3, Site Plan.

Table 1
Existing Riverside Community Hospital Uses on Site

ID	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925
B	Building B	Hospital	176,040	273	1965
C	Building C	Hospital – ICU and med/surg	111,450	34	1987
D	Building D	Hospital	41,431	66	1958
E	Building E	Hospital	3,565	N/A	1954
F	Building F	Hospital	1,077	N/A	1996
G	Parking structure and helipad	Parking	59,500	N/A	2002
H	Health education center	Meeting rooms	12,543	N/A	1979
I	Parking structure	Parking	96,084	N/A	1982
J	Parking structure	Parking	101,049	N/A	1986
K	Medical Office Building 2	Cancer center	65,503	N/A	1986
L	Brockton Storage Building	Storage	4,450	N/A	1958
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981
N	Medical Office Building 1	Medical offices	61,135	N/A	1975
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996
		Total square footage	852,186		

Source: Kimley-Horn 2014; Byrum, pers. comm. 2013.
ID = identification letter used on Figure 3, Site Plan; N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical



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7824-01

SOURCE: ESRI 2013

FIGURE 1
Regional Map

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

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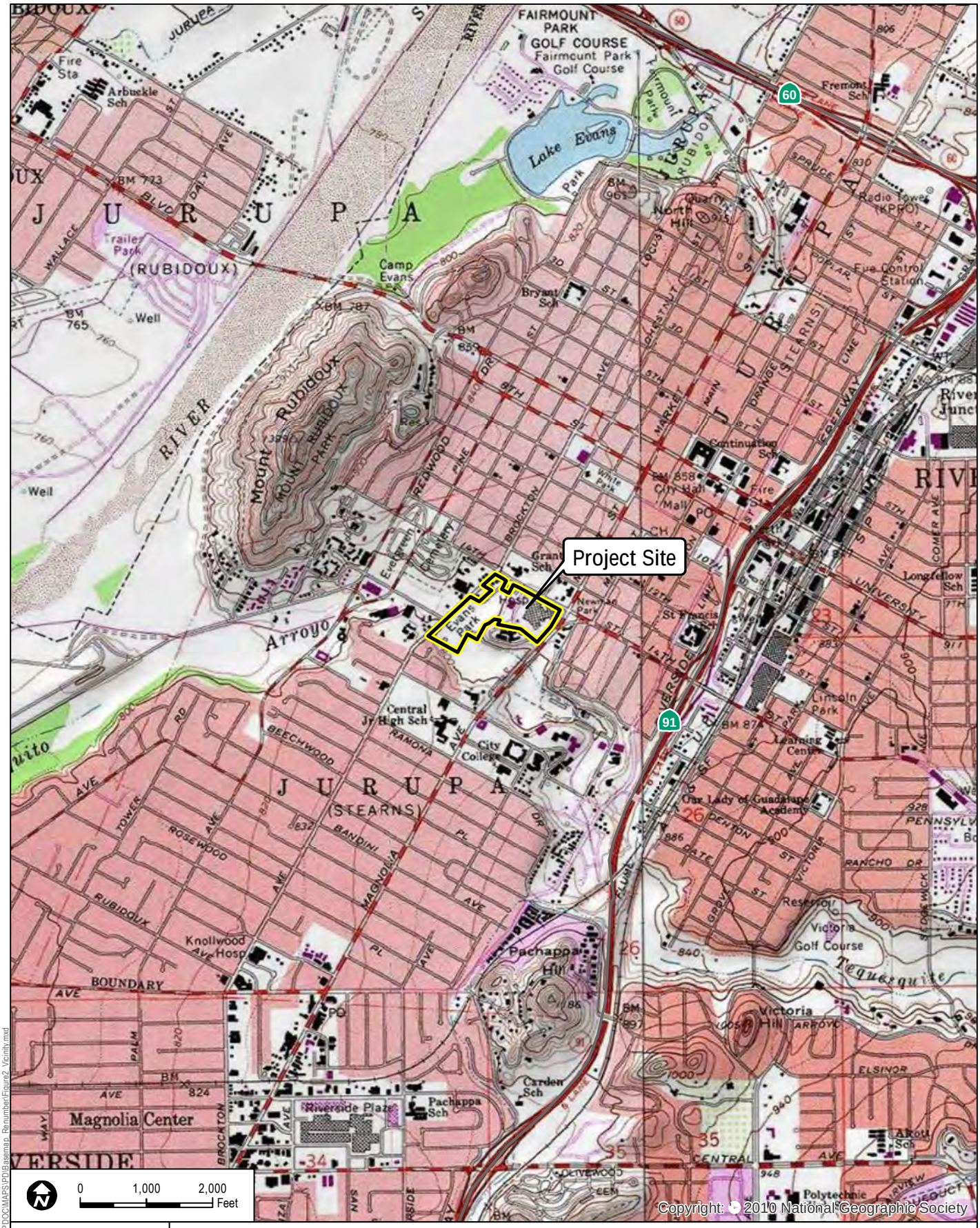

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7824-01

SOURCE: USGS 7.5-Minute Series Quadrangle (Riverside West, Riverside East)

FIGURE 2
Vicinity Map

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

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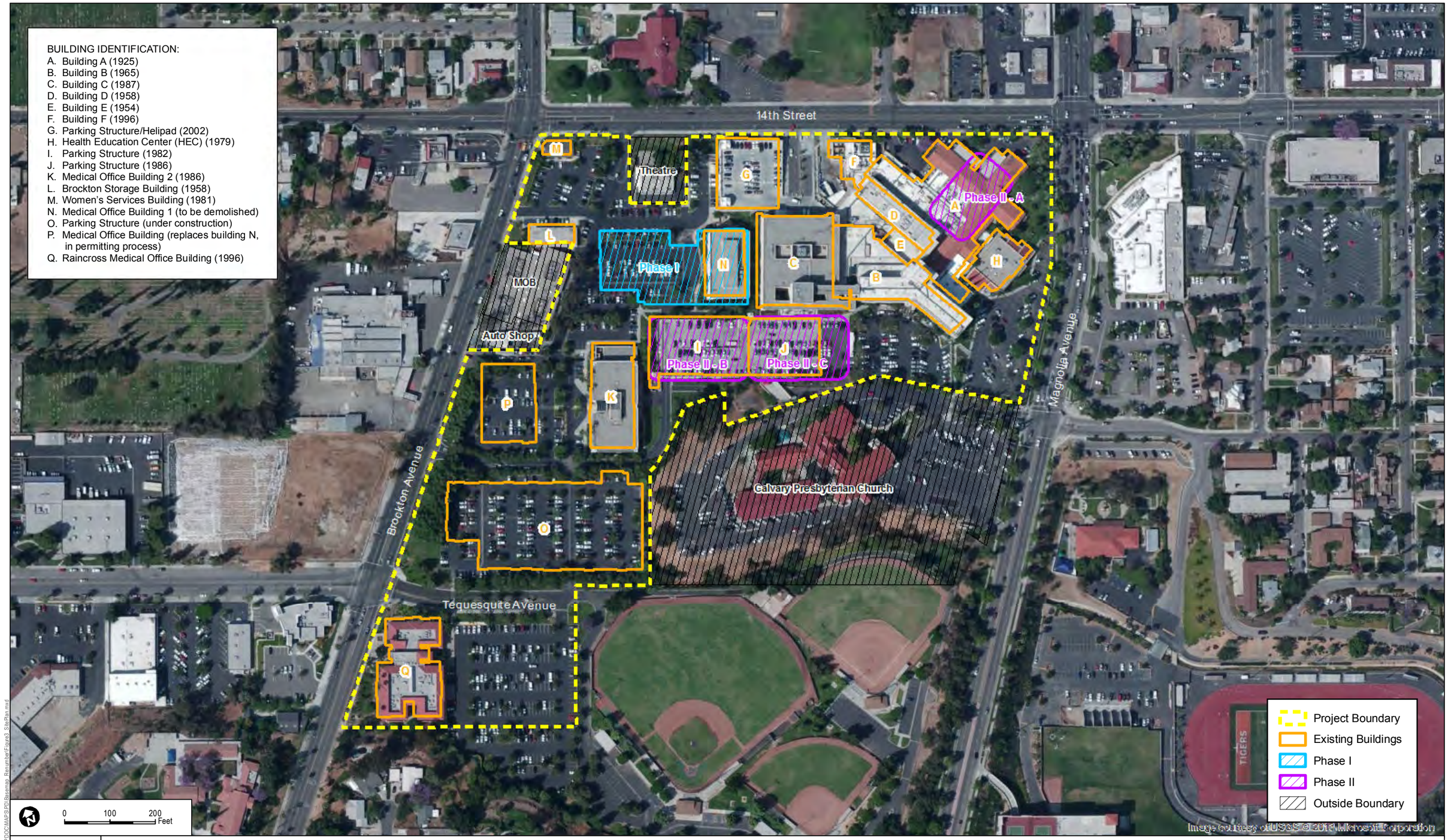

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7824-01

SOURCE: Kimley-Horn and Associates 5/20/2013, Perkins+Will 5/20/2013, BING 2013

FIGURE 3

Site Plan

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

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Project Baseline

The RCH campus currently occupies approximately 852,186 square feet of development. Figure 3, Site Plan, depicts existing structures, existing structures to be demolished, and previously approved structures to be built. For purposes of analysis in the Specific Plan (SP) and the Draft Environmental Impact Report (EIR), any approved ongoing development currently under construction or commencing construction within approximately 12 months of the release of the Notice of Preparation is considered part of the existing development/approvals baseline.

A new, five-level, 385,500-square-foot parking structure (Building O), located on the northeast corner of Brockton Avenue and Tequesquite Avenue, is currently under construction and is anticipated to be completed by January 2014. Construction of a new, three-story, 61,000-square-foot medical office building (Building P), located on the northeast corner of Brockton Avenue and Tequesquite Avenue, is scheduled for completion in March 2014. These structures are to be constructed over the next 12 months, before the EIR is approved and before the start of construction for the project; therefore, they are included in the baseline scenario. Table 2, Existing and Approved Riverside Community Hospital Uses on Site – Baseline Conditions, includes the existing RCH buildings/structures as well as the new parking structure and new medical office building, which are all to be considered as part of the baseline conditions.

Table 2
Existing and Approved Riverside Community Hospital Uses on Site – Baseline Conditions

ID	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	No change
B	Building B	Hospital	176,040	273	1965	No change
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change
D	Building D	Hospital	41,431	66	1958	No change
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1996	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1982	No change
J	Parking structure	Parking	101,049	N/A	1986	No change
K	Medical Office Building 2	Cancer center	65,503	N/A	1986	No change

Table 2
Existing and Approved Riverside Community Hospital Uses on Site – Baseline Conditions

ID	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change
N	Medical Office Building 1	Medical offices	61,135	N/A	1975	No change
O	Parking structure[a]	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Under construction; anticipated construction completion January 2014
P	Medical office building[a]	Medical offices	61,000	N/A	Construction anticipated to be completed 2014	Under construction; anticipated construction completion March 2014
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change
		Total square footage	1,298,686			

Source: Kimley-Horn 2014.
ID = identification on Figure 3, Site Plan; N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical
[a]Part of baseline conditions.

This technical report also analyzes an alternative baseline scenario, which assumes that the new parking structure, Building O, and the new medical office building, Building P, have not been completed.[2] Rather, emissions associated with the remaining phases of the new parking structure, Building O, and the new medical office building, Building P, were estimated as part of Phase I of the project (with no overlap in construction with the hospital bed tower), and not part of the baseline conditions. As noted in Table 2, Building O would be 385,500 square feet, and Building P would be 61,000 square feet.

[2] At the time of report preparation, the approved parking structure (Building O) and medical office building (Building P) were under construction. The majority of the activity required to construct these buildings has been accomplished, and both buildings would be completed prior to commencement of Phase I construction. However, an alternative baseline scenario has been included in the discussion to include the remaining phases of construction of the parking structure (Building O) and medical office building (Building P).

1.4 Project Description

RCH is proposing a new SP on the project site. A site master plan has been developed that includes both short-term and long-range planning goals that cover construction over a 30-year period. As previously mentioned, the primary focus of Phase I of the project is to construct a new hospital bed tower to alleviate seismic concerns associated with existing buildings and to meet seismic retrofit requirements as required by Senate Bill (SB) 1953. Phases IIa, IIb, and IIc of the project also address seismic concerns and include future and possible long-range development.

Construction Schedule

Construction for the project would occur in four phases over the next 30 years (2014–2043). Phase I would occur sometime between 2014 and 2017. Phase IIa would occur sometime between 2017 and 2024, Phase IIb would occur sometime between 2024 and 2029, and Phase IIc would occur sometime between 2030 and 2043. Construction work includes demolition; clearing and grading; construction of hospital towers and other related hospital use facilities; trenching; connection of water, sewer, and storm drain facilities; installation of electrical, gas, and phone lines; site fine grading, base, and paving; installation of lighting; and installation of landscape and irrigation.

Limited project construction details and equipment fleet specifications are available at this time; thus, assumptions were made to provide a reasonable analysis of environmental impacts. However, the following are typical types of construction equipment that would be expected:

- Concrete/industrial saws
- Dozers
- Tractor/loaders/backhoes
- Forklifts
- Welders
- Cement and mortar mixers
- Paving equipment
- Trenching equipment
- Off-highway water trucks
- Materials delivery trucks
- Pneumatic tools
- Excavators
- Graders
- Cranes
- Generator sets
- Air compressors
- Pavers
- Scrapers
- Rollers
- Concrete trucks
- Asphalt trucks.

Estimated hours of equipment operation per day used for the air emissions modeling for the project are shown in Appendix A. To estimate motor vehicle emissions generated by worker vehicles (i.e., light-duty trucks and automobiles), it was assumed that each worker would generate two one-way trips per day. Since no specific information regarding worker trips is known at this time, worker trips and travel distances were estimated using California Emissions Estimator Model (CalEEMod) defaults.

In addition to construction equipment operation and worker trips, emissions from hauling trucks (i.e., dump trucks) and vendor trucks (i.e., delivery trucks) were estimated based on CalEEMod defaults. Dump truck trips were assumed to be required during demolition to transport the demolished building material and vendor trucks transporting concrete, steel, and other building materials were assumed to be required during the building construction phase (worker trip length: 14.7 miles; vendor trip length: 6.9 miles; hauling trip length: 20 miles). Estimated daily worker and vendor trips and total estimated haul truck trips are provided in Appendix A.

Phase I, IIa, IIb, and IIc project components are described below.

Phase I – 2014 to 2017

Phase I of the project will focus on a new, 251,500-square-foot, seven-story hospital bed tower that will house up to 105 new licensed beds with 35 intensive care patient rooms and 70 medical and surgical patient rooms to accommodate families, as well as expanding its service offerings to more critically ill patients, a laboratory, and food services operations. This development would bring the total licensed bed count on the hospital campus to approximately 478. The hospital bed tower would also accommodate the relocation of acute care services, such as dietary and laboratory services, that are currently housed in Building A, which is not compliant with SB 1953 (the Alfred E. Alquist Seismic Act, which requires replacing unsafe applicable hospital facilities by the year 2030). The hospital currently employs approximately 1,960 employees. A total of 187 employees will relocate from Building A (119 laboratory employees and 68 dietary employees) to the new Phase I hospital tower and an additional 330 estimated employees would be needed to serve the new tower, resulting in a total of approximately 2,290 employees campuswide during this phase. During Phase I, Building A would be used for hospital administrative support.

Construction of the new hospital bed tower for Phase I would eliminate 69 parking spaces (see Figure 3, Site Plan). The existing Building N (Medical Office Building 1) would be proposed for demolition under Phase I to accommodate the new hospital bed tower. Building N would already be vacant prior to demolition as the physicians/staff would be relocated to the new Building P (which will be completed in March 2014 under the baseline/existing conditions). Also included

in Phase I, Building B is proposed for a full seismic upgrade, including new windows as a result of the retrofit. Table 3 lists the existing RCH buildings/structures with the addition of the Phase I components of the project.

Table 3
Existing and Approved Riverside Community Hospital Uses on Site, including Phase I of the Project

ID	Building/ Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	Dietary/lab to move to the Phase I bed tower; Building A used for hospital administrative support
B	Building B	Hospital	176,040	273	1965	No change in footprint, but seismic upgrades needed
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change
D	Building D	Hospital	41,431	66	1958	No change in footprint, but seismic upgrades needed
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1996	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1982	No change
J	Parking structure	Parking	101,049	N/A	1986	No change
K	Medical Office Building 2	Cancer center	65,503	N/A	1986	No change
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change
N	Medical Office Building 1	Medical offices	61,135	N/A	1975	To be demolished as part of Phase I of the project
O	Parking structure[a]	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Part of baseline conditions

Table 3
Existing and Approved Riverside Community Hospital Uses on Site, including Phase I of the Project

ID	Building/ Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
P	Medical office building[a]	Medical offices	61,000	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change
Phase I	New Phase I hospital bed tower	Hospital	251,500	189		Phase I of the project
Total square footage[b]			1,489,051			

Source: Kimley-Horn 2014.
Note: Shaded rows represent changes from baseline conditions.
ID = identification on Figure 3, Site Plan; N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical
[a] Part of baseline conditions, except in alternate baseline scenario.
[b] Building N is not calculated in the total square footage as it is being demolished as part of Phase I of the project

Phases IIa, IIb, and IIc – 2017 to 2043

During Phases IIa, IIb, and IIc of the project, it is anticipated that several new structures would be constructed on the existing 22.5-acre hospital campus over a 30-year period.

Phase IIa – 2017 to 2024

Phase IIa would occur sometime between 2017 and 2024 and would consist of the demolition of Building A since it is not in compliance with SB 1953 and can no longer house acute care services. An approximately 100,000-square-foot mixed-use building is proposed on the Building A site. In addition, the buildout of the shell space (84 additional licensed beds) in the Phase I tower would most likely occur during this phase (or earlier if necessary). Once the tower has been built, the maximum bed capacity on campus would be 562 licensed beds. Additional surface or structure parking is also anticipated to be needed during this phase to support the new space.

Phase IIb – 2024 to 2029

Phase IIb would occur sometime between 2024 and 2029 and would consist of a second new, estimated nine-story, 180-foot tall, more than 600,000-square-foot replacement bed tower, totaling 339 licensed beds (273 licensed beds relocated from Building B and 66 licensed beds

relocated from Building D to the proposed replacement bed tower after the seismic upgrades are complete under Phase I). The relocation of 339 licensed beds would keep the number of licensed beds on campus at 562. Phase IIb focuses on relocating licensed beds and acute care services out of Building B and Building D to the new second tower because as of 2030, Buildings B and D will no longer be in compliance with SB 1953. Once the licensed beds are relocated to the new second hospital bed tower, Building B and Building D will be used for outpatient, skilled nursing, and support services and education (e.g., University of California at Riverside (UCR) program space). Phase IIb includes the existing parking structures (identified as I and J on Figure 3, Site Plan) to be demolished prior to the construction of the Phase IIb replacement bed tower and future Phase IIc portion of the project. Some additional convenience parking could be included during this phase.

Phase IIc – 2030 to 2043

Phase IIc would occur sometime between 2030 and 2043 and is expected to include the following:

- Addition of 38 licensed beds, to take the campuswide total to 600 licensed beds (this could occur in Phase IIb if need is demonstrated prior to 2030)
- Construction of ancillary services as necessary
- Construction of surface or structure parking as needed to support growth.

Long-range development as part of Phase IIc of the project could include future acute care expansions, parking structures, or other ancillary uses, including but not limited to the following:

- Acute care services
- Central utility plants
- Medical office buildings and clinics
- Outpatient services buildings
- Education centers
- Dental clinics
- Imaging centers
- Pharmacies
- Wellness centers
- Physical therapy or rehabilitation centers
- Community centers
- Optometry services
- Medical retail (medical supplies)
- Off-site street parking, parking structures, or surface parking lots
- Hotel facilities.

Table 4 lists the existing RCH buildings/structures as well as Phase I, Phase IIa, and Phase IIb components of the project.

Table 4
Existing and Approved Riverside Community Hospital Uses on Site, Phases I, IIa, and IIb of the Project

ID	Building/ Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	To be demolished as part of Phase IIa of the project
B	Building B	Hospital	176,040	273	1965	Part of Phase IIb of the project: 273 licensed beds will be moved to the new Phase IIb replacement bed tower; Building B will be used for outpatient, skilled nursing, support, and education
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change
D	Building D	Hospital	41,431	66	1958	Part of Phase IIb of the project: 66 licensed beds will be moved to the new Phase IIb replacement bed tower; Building D will be used for outpatient, skilled nursing, support, and education
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1997	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1983	To be demolished as part of Phase IIb of the project
J	Parking structure	Parking	101,049	N/A	1983	To be demolished as part of Phase IIb of the project
K	Medical Office Building 2	Cancer center	65,503	N/A	1986	No change
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change

Table 4
Existing and Approved Riverside Community Hospital Uses on Site, Phases I, IIa, and IIb of the Project

ID	Building/ Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
N	Medical Office Building 1	Medical offices	61,135	N/A	1975	To be demolished as part of Phase I of the project
O	Parking structure	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
P	Medical office building	Medical offices	60,897	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change
Phase I	New Phase I hospital bed tower	Hospital	251,500	189		Part of Phase I of the project
Phase IIb	New Phase II replacement bed tower	Hospital	600,000+	377[a]		Part of Phase IIb of the project
Phase IIa	Mixed-use building in location of Building A	Medical offices	100,000	N/A		Phase IIa of the project
Total square footage[b]			1,994,245			

Source: Kimley-Horn 2014.
Notes: Phase IIc is not included in the table since specific project development details under Phase IIc are not known at this time.
Shaded rows represent changes from baseline conditions and Phase I of the project.
ID = identification on Figure 3, Site Plan; N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical
[a] Phase IIb hospital bed tower licensed beds includes the licensed beds that would be relocated from Building B (273 licensed beds) and Building D (66 licensed beds) and future addition of 38 licensed beds to the Phase IIb hospital bed tower (273+66+38=377 licensed beds).
[b] Buildings A, I, J, and N are not calculated in the total square footage as they are proposed for demolition as part of Phase I or Phase II of the project.

Full buildout through Phase IIb of the project would include a total of approximately 1,994,245 square feet of hospital campus uses development and a hospital buildout capacity of approximately 600 licensed beds.

1.5 Project Design Features

Table 5 identifies the project design features that would be applied to the project to reduce energy usage and associated greenhouse gas (GHG) emissions; however, the reduction in energy usage and GHG emissions due to implementation of these project design features is not quantifiable. Therefore, and again to provide a worst-case analysis of potential impacts, this study did not assume that any reduction in GHGs would occur as a result of the implementation of these project design features. The project design features will be incorporated into the SP.

Table 5
Project Design Features – GHGs

Building Component	Design Feature
Roof	Single-ply thermoplastic roof membrane over 5/8-inch exterior gypsum sheathing over rigid insulation over metal deck with lightweight concrete fill.
	Minimum R-30 insulation.
	Certified compliant membrane with California Energy Commission definition of a cool roof. Based on G410-20 feltback membrane by Sika Sarnafil Inc.; minimum 80 mil, white.
	Initial Solar Reflectance: Minimum measured initial solar reflectance value of 0.85 plus or minus 0.02, when tested in compliance with ASTM C 1549, ASTM E 903, or ASTM E 1918.
	Three-Year Aged Solar Reflectance: Minimum measured solar reflectance value of 0.60, when maintained under normal conditions and tested in compliance with ASTM C 1549, ASTM E 903, or ASTM E 1918.
Exterior wall	Type 1: Cast stone over continuous rigid insulation on fluid applied air/vapor barrier over 5/8-inch exterior gypsum sheathing over 6-inch metal stud framing with bat insulation; total system minimum R-19.
	Type 2: Three-inch insulated composite metal panel over fluid applied water protection over 5/8-inch exterior gypsum sheathing over 9-inch metal stud framing with bat insulation; total system minimum R-19.
	Type 3: Six-inch architectural precast concrete over 6-inch metal stud framing, used in non-conditioned garage stair tower.
Glazing	Vision Glass Insulating Glazing Units (IGUs): Design is based on PPG Solarban R100 solarblue tinted over clear glass (which has visible light-exterior reflectance of 15% (Viracon 2012)).
	Winter Nighttime Center-of-Glass (COG) U-Factor: Maximum 0.29 BTU per hour per square foot per degree Fahrenheit.
	Summer Daytime COG U-Factor: Maximum 0.27 BTU per hour per square foot per degree Fahrenheit.
	Total Shading Coefficient: Maximum 0.22, when calculated using a spectral data file determined in accordance with NFRC 300 and NFRC Verification Procedures.
	Total Solar Heat Gain Coefficient: Maximum 0.19, when determined in compliance with NFRC 200.
	Ceramic-Coated Spandrel Glass IGUs: Design is based on 1-inch VE1-42 Insulating HS/HS Spandrel by Viracon (which has visible light-exterior reflectance of 15% (Viracon 2012)).
	Winter Nighttime COG U-Factor: Maximum 0.29 BTU per hour per square foot per degree Fahrenheit.
	Summer Daytime COG U-Factor: Maximum 0.27 BTU per hour per square foot per degree Fahrenheit.

Table 5
Project Design Features – GHGs

Building Component	Design Feature
Lighting systems – interior (interior lighting systems will not be necessary in all rooms)	Provide individual lighting controls for minimum of 90% of building occupants to enable adjustments to suit individual task needs and preferences.
	Provide dimming or multilevel switching for all spaces larger than 100 square feet in which the connected lighting load exceeds 0.8 watts (W) per square foot.
	Provide time switches, photoelectric switches, occupancy sensors, and light sensors.
	Provide dimming controls.
	LED exit signs used.
Exterior lighting	55 W compact fluorescent lamp, 39 W LED lamp pole lights, 39 W compact fluorescent bollard light.
Indoor building water use	Toilets – 1.28 gallons/flush. Not all toilets will comply with the indoor building water use.
	Urinals – 1.0 pints/flush.
	Faucets – 0.5 gallons/minute. Not all faucets will comply with the indoor building water use.
	Showers – 2.5 gallons/minute.
Outdoor water use	Irrigation – Fully automatic, electronically controlled irrigation using low-flow spray heads, rotors, and drip irrigation technology.
	Irrigation Control – Controllers equipped with rain-sensing shutoff switches.
	Water Usage – Modify plant palette to use water-efficient, drought-tolerant, naturalized plant materials.

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2.0 EXISTING CONDITIONS

2.1 Climate and Topography

Air quality in the project area is affected not only by various emission sources (e.g., mobile, industry), but also by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall. The SCAB's combination of topography, low mean mixing height, abundant sunshine, and emissions from one of the largest urban areas in the United States has historically resulted in some of the worst air pollution in the nation.

Although the SCAB has a semiarid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore daytime breeze of 8–12 miles per hour (mph) and an offshore nighttime breeze of 3–5 mph. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly Santa Ana winds from the mountains and deserts northeast of the SCAB. Summer wind flow patterns represent worst-case conditions because this is the period of higher temperatures and more sunlight, which results in more ozone (O_3) formation.

The City of Riverside's (the City's) climate is characterized by relatively low rainfall, with warm summers and mild winters. Average temperatures range from a high of 95 degrees Fahrenheit (°F) in August to a low of 40°F in December. Annual precipitation averages about 0.5 to 2.5 inches, falling mostly from December through March (City-Data.com 2012).

During spring and early summer, pollution produced during any one day is typically blown out of the SCAB through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. The vertical dispersion of air pollutants in the SCAB is limited by temperature inversions in the atmosphere close to the Earth's surface. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are carbon monoxide (CO), particulate matter ($PM_{2.5}$ and PM_{10}), and nitrogen dioxide (NO_2) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen (NO_x) to form photochemical smog.

2.2 Sensitive Receptors

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed "sensitive receptors" are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, as identified by CARB, may include children, the elderly, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors may include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes.

There are several schools, childcare centers/preschools, and parks located in the vicinity of the project site, in addition to residences. The nearest residences (located adjacent to 14th Street, west of Brockton Avenue) would be approximately 435 feet from the nearest construction area (Phase I hospital bed tower). The nearest school (Grant Elementary School, which also houses a childcare center) would be approximately 285 feet from the construction area (Phase I hospital bed tower). The childcare center at Riverside Community College on Magnolia Avenue and 15th Street would be approximately 560 feet from the construction area (Phase IIc). A small park (Newman Park) is located at the southeast corner of Magnolia Avenue and 14th Street, approximately 190 feet from the nearest construction point (Phase IIa). Evans Sports Complex is located south of the Calvary Presbyterian Church, approximately 450 feet away from the location of Phase IIc construction.

3.0 POLLUTANTS AND EFFECTS

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, NO_2, CO, sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns in size (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size ($PM_{2.5}$), and lead (Pb). These pollutants, as well as toxic air contaminants (TACs) are discussed below.[3] In California, sulfates (SO_4), vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors, such as hydrocarbons and NO_x. These precursors are mainly NO_x and volatile organic compounds (VOCs; also referred to as reactive organic compounds or gases (ROGs)). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ozone). O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important

[3] The following descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on the U.S. Environmental Protection Agency's *Six Common Air Pollutants* (EPA 2013a) and the CARB's *Glossary of Air Pollutant Terms* (CARB 2012).

precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections.

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil, fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter ($PM_{2.5}$) is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs. Respirable particulate matter, or

coarse particulate matter (PM_{10}), is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle, as well as producing haze and reducing regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive are smokers and people who cannot breathe well through their noses, as well as exercising athletes, because many breathe through their mouths.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient

performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases or ROGs). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emission sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. CARB classified "particulate emissions from diesel-fueled engines" (i.e., diesel particulate matter) as a TAC in August 1998. Diesel particulate matter is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with diesel particulate matter (CARB 2000). To reduce the cancer risk associated with diesel particulate matter, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000).

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4.0 REGULATORY SETTING

4.1 Federal

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants; setting hazardous air pollutant standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. NAAQS are established for criteria pollutants under the Clean Air Act, which are O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the standards within mandated time frames.

4.2 State

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered “in attainment” if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour

and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 6, Ambient Air Quality Standards.

Table 6
Ambient Air Quality Standards

Pollutant	Average Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary[c,d]*	*Secondary[c,e]*
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as primary standard
	8 hours	0.070 ppm (137 μg/m³)	0.075 ppm (147 μg/m³)	
CO	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	None
	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	
NO_2	Annual arithmetic mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	Same as primary standard
	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	
SO_2	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[7]	—
	Annual	—	0.030 ppm (for certain areas)[7]	—
PM_{10}	24 hours	50 μg/m³	150 μg/m³	Same as primary standard
	Annual arithmetic mean	20 μg/m³	—	
$PM_{2.5}$	24 hours	No separate state standard	35 μg/m³	Same as primary standard
	Annual arithmetic mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[f]	30-day average	1.5 μg/m³	—	—
	Calendar quarter	—	1.5 μg/m³ (for certain areas)[g]	Same as primary standard
	Rolling 3-month average	—	0.15 μg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m³)	—	—
Vinyl chloride[f]	24 hours	0.01 ppm (26 μg/m³)	—	—
Sulfates (SO_4)	24 hours	25 μg/m³	—	—

Table 6
Ambient Air Quality Standards

Pollutant	Average Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary[c,d]*	*Secondary[c,e]*
Visibility-reducing particles	8 hours (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: CARB 2013a.

ppm= parts per million by volume; $\mu g/m^3$ = micrograms per cubic meter; mg/m^3= milligrams per cubic meter

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in 17 CCR 70200.

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant..

f CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

g In 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

As part of its diesel risk reduction program, CARB adopted an Airborne Toxic Control Measure (ATCM) that applies to new and in-use stationary compression-ignition (i.e., diesel) engines. The ATCM was adopted in 2004 and revised in November 2010 with an effective date of May 19, 2011. After December 31, 2008, the ATCM requires that new emergency standby engines must comply with EPA emission standards applicable to a 2007-model-year off-road engine of the same horsepower rating. The ATCM further limits the particulate matter emissions from an emergency standby engine operated less than 50 hours per year for maintenance and testing to 0.15 gram per brake-horsepower-hour.

4.3 Local

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SCAB, where the project is located. The SCAQMD operates monitoring stations in the SCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain the CAAQS and NAAQS in the SCAB. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

The SCAQMD's governing board adopted the 2003 AQMP on August 1, 2003. The 2003 AQMP updates the attainment demonstration for the federal standards for O_3 and PM_{10}, replaces the 1997 attainment demonstration for the federal CO standard, provides a basis for a maintenance plan for CO for the future, and updates the maintenance plan for the federal NO_2 standard that the SCAB has met since 1992 (SCAQMD 2003). On March 10, 2009, the EPA issued a final rule partially approving and partially disapproving the 2003 AQMP. On February 2, 2011, the U.S. Court of Appeals for the Ninth Circuit ruled that EPA's partial approval was arbitrary and capricious. The court further ruled that the EPA should have ordered California to submit a revised attainment plan for the SCAB after it disapproved the 2003 AQMP and that the EPA should have required transportation control measures.

The SCAQMD's governing board adopted the 2007 AQMP on June 1, 2007. The 2007 AQMP includes the same updates as the 2003 AQMP and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools (SCAQMD 2007). As part of the 2007 AQMP, the SCAQMD requested that the EPA "bump up" the O_3 nonattainment status from severe to extreme to allow additional time for the SCAB to achieve attainment with the federal standard. The additional time would provide for implementation of state and federal measures that apply to sources over which the SCAQMD does not have control. The 2007 AQMP has been approved by CARB; however, on November 22, 2010, the EPA issued a proposed rule to approve in part and disapprove in part the portions related to attainment of the federal $PM_{2.5}$ standard. The EPA, however, approved the redesignation of the SCAB to an extreme O_3 nonattainment area, effective June 4, 2010.

On December 7, 2012, the SCAQMD's governing board adopted the Final 2012 AQMP (SCAQMD 2013), which is designed to meet applicable federal and state requirements for O_3 and particulate matter. The Final 2012 AQMP demonstrates attainment of the federal 24-hour $PM_{2.5}$ standard by 2014 in the SCAB through adoption of all feasible measures. The 2012 AQMP also updates the EPA-approved 8-hour O_3 control plan with new measures designed to reduce reliance on the Clean Air Act Section 182(e)(5) long-term measures for NO_x and VOC reductions. Based on general plans for cities and counties in the SCAB, demographic growth forecasts for various socioeconomic categories (i.e., population, housing, employment by industry) developed by the Southern California Association of Governments (SCAG) for their 2012 Regional Transportation Plan were used in the 2012 AQMP. In addition, emission reductions resulting from SCAQMD regulations adopted by June 2012 and CARB regulations adopted by August 2011 are included in the baseline. The 2012 AQMP reduction and control measures, which are outlined to mitigate emissions, are based on existing and projected land use and development. The Final 2012 AQMP was approved by CARB on January 25, 2013, and is being reviewed by the EPA.

Emissions that would result from mobile, stationary, and area sources during construction and operation of the project are subject to the rules and regulations of the SCAQMD. The SCAQMD rules applicable to the construction and operation of the project may include the following rules (SCAQMD 2011). The permitting, boiler, and engines rules would be applicable because the project would include devices subject to these rules.

Rule 201 – Permit to Construct: This rule establishes an orderly procedure for the review of new and modified sources of air pollution through the issuance of permits. Rule 201 specifies that any facility installing nonexempt equipment that causes or controls the emissions of air pollutants must first obtain a permit to construct from the SCAQMD.

Rule 401 – Visible Emissions: This rule establishes the limit for visible emissions from stationary sources. This rule prohibits visible emissions dark or darker than Ringlemann No. 1 for periods greater than 3 minutes in any hour.

Rule 402 – Nuisance: This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.

Rule 403 – Fugitive Dust: This rule requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions

from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.

Rule 431.2 – Sulfur Content of Liquid Fuels: The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose both of reducing the formation of SO_x and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile source applications.

Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines: This rule applies to stationary and portable engines rated at greater than 50 horsepower. The purpose of Rule 1110.2 is to reduce NO_x, VOC, and CO emissions from engines. Emergency engines, including those powering standby generators, are generally exempt from the emissions and monitoring requirements of this rule as they have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.

Rule 1113 – Architectural Coatings: This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional and Commercial Boilers, Steam Generators, and Process Heaters: This rule applies to boilers, steam generators, and process heaters of equal to or greater than 5 million British thermal units (Btu) per hour rated heat input capacity used in all industrial, institutional, and commercial operations with the exception of boilers used by electric utilities to generate electricity, boilers and process heaters with a rated heat input capacity greater than 40 million Btu per hour that are used in petroleum refineries, and sulfur plant reaction boilers. Under this rule, the NO_x and CO exhaust concentration for Group III boilers (rated from 5 to less than 20 million Btu per hour) are limited to 9 ppm and 400 ppm, respectively, by volume referenced at 3% oxygen on a dry basis.

Regulation XIII – New Source Review: This regulation sets preconstruction review requirements for new, modified, or relocated facilities to ensure that the operation of such facilities does not interfere with progress in attainment of the NAAQS and that future economic growth within SCAQMD is not unnecessarily restricted. The specific air quality goal of this regulation is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors. In addition to nonattainment air

contaminants, this regulation will also limit emission increases of ammonia and O_3-depleting compounds from new, modified, or relocated facilities by requiring the use of best available control technology.

Regulation XIV – Toxics and Other Non-Criteria Pollutants: This regulation includes rules that regulate toxics and other non-criteria pollutants. It provides specifications for maximum individual cancer risk, cancer burden, and noncancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units that emit TACs. The rules establish allowable risks for permit units requiring new permits pursuant to Rules 201 or 203. Under this regulation, Rule 1401 (New Source Review of Toxic Air Contaminants) specifies limits for maximum individual cancer risk, cancer burden, and non-cancer acute and chronic hazard indices from new permit units, relocations, or modifications to existing permit units that emit TACs listed in the rule. In addition, Rule 1401.1 (Requirements for New and Relocated Facilities near Schools) may impose other criteria on sources of TACs due to the proximity of schools to the project site.

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5.0 BACKGROUND AIR QUALITY

5.1 SCAB Attainment Designation

An area is designated "in attainment" when it is in compliance with the NAAQS and/or CAAQS. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare with a margin of safety.

The criteria pollutants of primary concern considered in this air quality assessment include O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Although there are no ambient standards for VOCs or NO_x, they are important because they are precursors to O_3.

The entire SCAB is designated as a nonattainment area for both federal and state O_3 standards. The EPA has classified the SCAB as an "extreme" nonattainment area and has mandated that it achieve attainment no later than June 15, 2024. The federal NO_2 standard was revised in 2010, and all areas of California have been designated unclassifiable/nonattainment. The SCAB is designated as a nonattainment area for the state NO_2 standards. The SCAB is designated as an attainment area for federal and state CO and SO_2 standards, as an attainment area for the federal PM_{10} standard, and as a nonattainment area for the state PM_{10} standards. Riverside County is designated unclassifiable/attainment for state and federal lead standards.

The attainment classifications for these criteria pollutants are outlined in Table 7, SCAB Attainment Classification.

Table 7
SCAB Attainment Classification

Pollutant	Averaging Time	State Designation/Classification	National Designation/Classification
O_3	1 hour 8 hours	Nonattainment Nonattainment	— Nonattainment (extreme)
NO_2	1 hour Annual arithmetic mean	Nonattainment	Unclassifiable/attainment
CO	1 hour 8 hours	Attainment	Attainment (maintenance)
SO_2	1 hour 24 hours Annual arithmetic mean	Attainment	Unclassifiable
PM_{10}	24 hours Annual arithmetic mean	Nonattainment	Attainment (maintenance)

Table 7
SCAB Attainment Classification

Pollutant	Averaging Time	State Designation/Classification	National Designation/Classification
$PM_{2.5}$	24 hours Annual arithmetic mean	Nonattainment	Nonattainment
Lead (Pb)	Quarter	—	Unclassifiable/attainment
	3-month average	—	Unclassifiable/attainment
	30-day average	Attainment	—
Sulfates (SO_4)	24 hours	Attainment	—
Hydrogen sulfide (H_2S)	1 hour	Unclassified	—
Vinyl chloride[a]	24 hours	Unclassified	—
Visibility-reducing particles	8 hours (10:00 a.m.–6:00 p.m.)	Unclassified	—

Sources: CARB 2013b (state designation/classification); EPA 2013b (national designation/classification).
[a] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined.

5.2 Air Quality Monitoring Data

The project area's local ambient air quality is monitored by SCAQMD and CARB. CARB monitors ambient air quality at approximately 250 air quality monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The Riverside-Magnolia Monitoring Station, located at 7002 Magnolia Avenue, Riverside, California, is the nearest air quality monitoring station to the project area, approximately 2.2 miles southwest from the RCH site. The data collected at this station are considered representative of the air quality experienced in the project vicinity. Air quality data from 2010 through 2012 for the Riverside-Magnolia station are provided in Table 8, Ambient Air Quality Data. Because O_3 is not monitored at the Riverside-Magnolia station, O_3 measurements were taken from the Riverside-Rubidoux Monitoring Station (5888 Mission Boulevard, Rubidoux, California, approximately 2.4 miles southeast from the RCH site). The number of days exceeding the ambient air quality standards is shown in Table 9, Frequency of Air Quality Standard Violations.

Table 8
Ambient Air Quality Data
(parts per million unless otherwise indicated)

Pollutant	Averaging Time	2010	2011	2012	Most Stringent Ambient Air Quality Standard	Monitoring Station
O_3	1 hour	0.128	0.128	0.126	0.09	Riverside-Rubidoux
	8 hours	0.098	0.115	0.102	0.070	
NO_2	1 hour	0.061	0.057	0.060	0.100	Riverside-Magnolia
	Annual	0.017	N/A	N/A	0.030	
CO	1 hour	2.5	3.1	2.7	20	Riverside-Magnolia
	8 hours	1.73	1.49	1.46	9.0	
SO_2	24 hours	0.005	N/A	N/A	0.04	Riverside-Magnolia
	Annual	0.001	0.000	N/A	0.030	
PM_{10}	24 hours	45.8 µg/m^3	89.4 µg/m^3	57.5 µg/m^3	50 µg/m^3	Riverside-Magnolia
	Annual	N/A	N/A	N/A	20 µg/m^3	
$PM_{2.5}$	24 hours	43.7 µg/m^3	51.6 µg/m^3	30.2 µg/m^3	35 µg/m^3	Riverside-Magnolia
	Annual	N/A	15.2	N/A	12 µg/m^3	

Sources: CARB 2013c; EPA 2013c (for 1-hour CO).
Note: Data taken from CARB iADAM (2012) or EPA AirData (2012) represent the highest concentrations experienced over a given year.
N/A = insufficient data available to determine the value; µg/m^3 = micrograms per cubic meter

Table 9
Frequency of Air Quality Standard Violations

Year	Number of Days Exceeding Standard					
	State 1-Hour O_3	*State 8-Hour O_3*	*National 8-Hour O_3*	*State 24-Hour PM_{10}* [a]	*National 24-Hour PM_{10}* [a]	*National 24-Hour $PM_{2.5}$* [a]
2010	31	74	47	42.7 (7)	0.0 (0)	4.0 (4)
2011	52	92	67	30.3 (10)	N/A (0)	5.0 (5)
2012	27	70	47	51.7 (22)	0.0 (0)	7.0 (7)

Source: CARB 2013c
Note: Exceedances of federal and state standards are only shown for ozone and particulate matter. All other criteria pollutants did not exceed either federal or state standards during the years shown.
N/A = insufficient data available to determine the value.
[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and 3 days, respectively. Number of days exceeding the standards is mathematical estimates of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

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6.0 THRESHOLDS OF SIGNIFICANCE

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). In accordance with this guidance, a project would have a significant environmental impact if it would:

- Conflict with or obstruct the implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people.

In addition, Appendix G of the CEQA Guidelines indicates that where available, the significance criteria established by the applicable AQMD or pollution control district may be relied upon to determine whether the project would have a significant impact on air quality. The most recent version of the SCAQMD *CEQA Air Quality Handbook* (SCAQMD 1993) sets forth quantitative emissions significance thresholds below which a project would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 10, SCAQMD Air Quality Significance Thresholds, are exceeded. A project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for O_3, which is a nonattainment pollutant, if the project's construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 10. These emissions-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly (see discussion of O_3 and its sources in Chapter 3.0), and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods.

Table 10
SCAQMD Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	*Construction*	*Operation*
NO_x	100 lb/day	55 lb/day
VOC	75 lb/day	55 lb/day
PM_{10}	150 lb/day	150 lb/day
$PM_{2.5}$	55 lb/day	55 lb/day
SO_x	150 lb/day	150 lb/day
CO	550 lb/day	550 lb/day
Lead[a]	3 lb/day	3 lb/day
Toxic Air Contaminants and Odor Thresholds		
TACs (including carcinogens and noncarcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants[b]		
NO_2 1-hour average NO_2 annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.030 ppm (state) and 0.0534 ppm (federal)	
PM_{10} 24-hour average PM_{10} annual arithmetic mean	10.4 μg/m³ (construction)[c] and 2.5 μg/m³ (operation) 1.0 μg/m³	
$PM_{2.5}$ 24-hour average	10.4 μg/m³ (construction)[c] and 2.5 μg/m³ (operation)	
SO_2 1-hour average SO_2 24-hour average	0.25 ppm (state) and 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfates (SO_4) 24-hour average	25 μg/m³ (state)	
CO 1-hour average CO 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average[a] Lead rolling 3-month average[a] Lead quarterly average[a]	1.5 μg/m³ (state) 0.15 μg/m³ (federal) 1.5 μg/m³ (federal)	

Source: SCAQMD 1993.
lb/day = pounds per day; ppm = parts per million; μg/m³ = microgram per cubic meter; ≥ = greater than or equal to
[a] The phasing out of leaded gasoline started in 1976; gasoline no longer contains lead.
[b] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2, unless otherwise stated.
[c] Ambient air quality threshold based on SCAQMD Rule 403.

The phasing out of leaded gasoline started in 1976. As gasoline no longer contains lead, the project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

The SCAQMD *CEQA Air Quality Handbook* also sets forth additional indicators of potential air quality impacts that should be used as screening criteria indicating the need for further analysis. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.
- Project could result in population increases within the regional statistical area that would be in excess of that projected in the AQMP and in other than planned locations for the project's buildout year.
- Project would have the potential to create or be subjected to an objectionable odor over 10 dilutions to thresholds (D/T) that could impact sensitive receptors.[4]
- Project would have hazardous materials on site and could result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.
- Project could emit an air toxic contaminant regulated by SCAQMD rules or that is on a federal or state air toxic list.
- Project could involve burning of hazardous, medical, or municipal waste as waste-to-energy facility.
- Project could be occupied by sensitive receptors within a quarter mile of an existing facility that emits air toxics identified in SCAQMD Rule 1401 or near CO hotspots.
- Project could emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million (SCAQMD 1993).

In addition to the above-listed emission-based thresholds, the SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the project as a result of construction activities. Such an evaluation is referred to as a localized significance threshold (LST) analysis. For project sites greater than 5 acres, potential impacts on local sensitive receptors are determined using an air quality dispersion model. Those impacts are

[4] This threshold would be applied to industrial and similar sources that would emit odorous substances, such as wastewater treatment plants and some chemical plants.

then compared to the LSTs. The Riverside-Magnolia station was identified as the representative meteorological monitoring station for the project. Data from this station were used to represent the meteorological conditions in Sensitive Receptor Area 23. The LSTs for NO_2 and CO were derived from the ambient air quality data in Sensitive Receptor Area 23 for the 3 previous years, as shown in Table 11, Localized Significance Thresholds. The LSTs for NO_2 and CO represent the allowable increase in concentrations above background levels in the vicinity of a project that would not cause or contribute to an exceedance of the relevant ambient air quality standards. The threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust). The significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards. For construction, the LSTs for PM_{10} and $PM_{2.5}$ are both 10.4 micrograms per cubic meter ($\mu g/m^3$) (SCAQMD 2008a). The LSTs applicable to construction of the project, along with the relevant ambient air quality standards, are shown in Table 11.

Table 11
Localized Significance Thresholds

Pollutant	Averaging Period	CAAQS/NAAQS		Peak Concentration (ppm)	LST Criteria[a]	
		µg/m³	*ppm*			
NO_2	1 hour	339	0.18	0.061	224	0.12
CO	1 hour	23,000	20	3.10	19,340	16.9
CO	8 hours	10,000	9.0	1.73	8,319	7.3
PM_{10}	24 hours	50	—	N/A	10.4	—
$PM_{2.5}$[b]	24 hours	35	—	N/A	10.4	—

Source: SCAQMD 2008a.
CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million; LST = localized significance criteria; N/A = not applicable
[a] LST criteria for NO_2 and CO are the differences between CAAQS and the peak concentration.
[b] California has not adopted a 24-hour standard for $PM_{2.5}$. The 24-hour $PM_{2.5}$ standard shown is the national standard.

7.0 IMPACTS

7.1 Consistency with Air Quality Plans

The project site is located within the SCAB under the jurisdiction of the SCAQMD, which is the local agency responsible for administration and enforcement of air quality regulations for the area. Construction and operation of the development proposed as part of the project may result in the emissions of additional short- and long-term criteria air pollutants in conflict with the SCAQMD AQMPs.

While striving to achieve the NAAQS for O_3 and $PM_{2.5}$ through a variety of air quality control measures, the Final 2012 AQMP also accommodates planned growth in the SCAB. Projects are considered consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP. The future emissions forecasts are primarily based on demographic and economic growth projections provided by SCAG. Thus, demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by SCAG for their 2012 Regional Transportation Plan, were used to estimate future emissions in the Final 2012 AQMP (SCAQMD 2013).

Project- and Program-Level Elements

The project site is an existing hospital campus and is currently located in the City's DSP-HC zone, which allows for the construction and operation of a hospital with a CUP. The project includes expansion of hospital-related facilities. An SP is proposed that will make future development more streamlined in that it will supersede existing entitlements, outline existing uses and future uses, and lay out a cohesive set of guidelines that will provide City staff, RCH, and the public with a clear understanding of how growth and development will occur at the site. The project would not result in substantial population growth.

The project site is designated DSP and DSP-HC in the City's General Plan (GP) 2025 (City of Riverside 2007a) and Zoning (City of Riverside 2007b), respectively. The site is currently developed with a hospital campus, which is in compliance with the DSP-HC designation for the site. The project would be consistent with the DSP and DSP-HC land use and zoning designations as a hospital campus and no change in land use would occur with implementation of the project. An SP (Dudek n.d.) is being prepared specifically for the RCH campus, which will supersede the existing DSP (City of Riverside 2002). Because long-range plans for the site

reflect continued hospital campus use in both the City's GP 2025 and the new SP, the project is considered to be consistent with the development envisioned in the City's GP 2025. Accordingly, the project would result in levels of employment and vehicle trips that are consistent with SCAG's growth projections anticipated in SCAQMD's Final 2012 AQMP. It is reasonable to assume vehicle trip generation and planned development for the site has been anticipated in the SCAG growth projections because the land use would remain the same. Since the planned growth of RCH, its land use intensity, and associated vehicle trips have been factored into the underlying growth projections of the Final 2012 AQMP, the project would not result in a conflict with or obstruct implementation of the applicable air quality plan. Thus, this impact would be **less than significant.**

7.2 Construction Impacts

Construction and operation of the project may result in emissions of criteria air pollutants from mobile, area, and/or stationary sources, which may cause exceedances of federal and state ambient air quality standards or contribute to existing nonattainment of ambient air quality standards. The following discussion identifies potential short- and long-term construction impacts that would result from implementation of the project. Feasible mitigation measures to reduce or avoid any potential significant impacts, as appropriate, are proposed.

Project- and Program-Level Elements

Construction of the project would result in the addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts. Fugitive dust (PM_{10} and $PM_{2.5}$) emissions would primarily result from grading and site preparation activities. NO_x and CO emissions would primarily result from the use of construction equipment and motor vehicles.

Pollutant emissions associated with construction activity were quantified using CalEEMod, Version 2013.2.2, available online (http://www.caleemod.com). Construction emissions were calculated for the estimated worst-case day over the construction periods associated with each phase. Default values provided by the program were used where detailed project information was not available.

The project includes multiple phases of development. Construction details for Phase I have been estimated by RCH's contractor (Skanska); however, construction details for Phases IIa, IIb, and IIc have not yet been determined since those phases have not been planned for; therefore, representative reasonable construction details based on Phase I information have been assumed. Additionally, each phase would be constructed independently, such that construction phases would not overlap.

Phase I

Phase I of the project includes construction of a new, 251,500-square-foot, seven-story hospital bed tower, central plant modifications, removal of 69 parking spaces, seismic upgrades to the existing Building B, and demolition of the existing 61,135-square-foot Building N (Medical Pffice Building 1) to accommodate the new hospital bed tower. The hospital bed tower would house up to 105 licensed beds, with 35 intensive care patient rooms and 70 medical and surgical patient rooms. Buildout of the shell space for 84 additional licensed beds in the hospital bed tower could occur as early as this phase, and is therefore accounted for in the total licensed beds under this phase. As a worst-case assumption, total bed count at the end of Phase I would be 562 licensed beds and total employees/staff at the end of Phase I would be 2,290 (RCH currently employs 1,960 employees and an additional 330 estimated employees would be needed to serve the new tower). Total square footage of the development on the RCH campus at the end of Phase I would be 1,489,051 square feet.

Phase I of the project would occur sometime between 2014 and 2017. For purposes of estimating project emissions during Phase I, and based on information provided by RCH's contractor (Skanska), the analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Demolition (rooftop equipment removal and building razing): June 2014 (2 months)
- Grading: October 2014 (1.5 weeks)
- Trenching (underground infrastructure, building foundation, and concrete foundation): October 2014 (1.5 weeks)
- Building construction (building foundation systems, initial building framing, and major column installation; steel framing, exterior shell, and interior wall framing; exterior building shell, initial interior structures, and flooring systems; and site work, exterior site yard installations, and interior floor, wall, and ceiling): November 2014 (18.5 months)

- Architectural coating (interior construction, building commissioning, and exterior shell finishes): June 2016 (4 months)
- Paving: December 2016 (2 months).

The construction equipment mix and estimated hours of equipment operation per day used for the air emissions modeling of the project are shown in Table 12, Phase I Construction Equipment. For this analysis, it was assumed that heavy construction equipment would operate 5 days a week (22 days per month) during project construction. Table 12 also presents the estimated number of workers anticipated for each construction sequence. To estimate motor vehicle emissions generated by worker vehicles (i.e., light-duty trucks and automobiles), it was assumed that each worker would generate two one-way trips per day. Because no specific information regarding worker trips is known at this time, worker trips and trip distances were estimated using CalEEMod defaults.

In addition to construction equipment operation and worker trips, emissions from hauling trucks (dump trucks) and vendor trucks (delivery trucks) were estimated. Dump truck trips were assumed to be required during demolition, grading, trenching, and building construction phases, and vendor trucks transporting concrete, steel, and other building materials were assumed to be required during the building construction phase. The lengths of these trips were estimated using CalEEMod defaults (worker trip length: 14.7 miles; vendor trip length: 6.9 miles; hauling trip length: 20 miles). Estimated daily worker and vendor trips and total estimated haul truck trips are provided in Appendix A. The construction of the Phase I, seven-story, 251,500-square-foot hospital bed tower is anticipated to involve approximately 17,740 cubic yards of export with 2,218 haul trips.

Table 12
Phase I Construction Equipment

Construction Phase	Workers	Equipment	Quantity	Hours/Day
Demolition	15	Concrete/industrial saws	1	8
		Excavators	3	8
		Rubber-tired dozers	2	6
Grading	15	Excavators	1	8
		Graders	1	8
		Rubber-tired dozers	1	6
		Tractors/loaders/backhoes	3	8
Trenching	5	Excavators	1	8
		Tractors/loaders/backhoes	1	8

Table 12
Phase I Construction Equipment

Construction Phase	Workers	Equipment	Quantity	Hours/Day
Building construction	23	Cranes	2	4
		Forklifts	2	8
		Generator sets	1	8
		Tractors/loaders/backhoes	3	7
		Welders	1	8
Architectural coating	5	Air compressors	2	6
Paving	10	Pavers	1	8
		Paving equipment	2	6
		Rollers	1	6

Source: Skanska 2013.

Implementation of the project would generate construction-related air pollutant emissions from three general activity categories: entrained dust, equipment and vehicle exhaust emissions, and architectural coatings. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. To account for dust control measures to comply with SCAQMD Rule 403 in the calculations, it was assumed that the active sites would be watered at least three times daily, resulting in an approximately 61% reduction. Exhaust from internal combustion engines used by construction equipment and hauling trucks (dump trucks) and vendor trucks (delivery trucks) and worker vehicles would result in emissions of NO_x, VOC, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce VOC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings). To ensure that these requirements are met, the City will require the project proponent to comply with SCAQMD Rule 403 and SCAQMD Rule 1113, which will be included in the project's conditions of approval.

Table 13, Phase I Estimated Maximum Daily Construction Emissions, presents the estimated maximum unmitigated daily construction emissions generated during construction of the project in each year, including demolition of Building N.

Table 13
Phase I Estimated Maximum Daily Construction Emissions
(pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Year 2014	8.58	126.09	76.66	0.21	13.77	7.53
Year 2015	3.99	33.20	23.47	0.04	2.59	2.09
Year 2016	17.07	48.27	35.51	0.06	3.66	3.00
Year 2017	1.05	11.07	8.57	0.01	0.71	0.58
Maximum daily emissions	17.07	126.09	76.66	0.21	13.77	7.53
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	Yes	No	No	No	No

Notes: See Appendix A for complete results.
These estimates reflect control of fugitive dust required by SCAQMD Rule 403.

Maximum daily emissions of NO_x would occur during the demolition, grading, and trenching phase in 2014 as a result of exporting materials, off-road equipment operation, and on-road haul trucks. Fugitive dust and off-road equipment emissions during the demolition, grading, and trenching phase in 2014 would generate the maximum daily $PM_{2.5}$ emissions. Maximum daily PM_{10} emissions would also occur during the demolition, grading, and trenching phase in 2014 and would primarily result from paved road dust generated by off-site haul trucks exporting waste to the closest landfill. The application of architectural coatings in 2016 would produce the maximum daily VOC emissions.

As shown in Table 13, daily construction emissions during Phase I of the project would not exceed the SCAQMD significance thresholds for VOC, CO, SO_x, PM_{10}, or $PM_{2.5}$ during construction in any of the construction years. Furthermore, construction-generated emissions would be temporary and would not represent a long-term source of criteria air pollutant emissions. In addition, the project would be required to comply with SCAQMD Rule 403 to control dust emissions generated during the demolition and other grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering the active sites approximately three times daily, depending on weather conditions. The project, however, would exceed the daily construction emissions threshold for NO_x during Phase I of the project. As shown in Table 13, the maximum construction-generated NO_x emissions of 126.09 pounds per day would exceed the SCAQMD's quantitative significance threshold of 100 pounds per day. As such, Phase I of the project would result in a **potentially significant** impact to air quality. The following mitigation measure shall be incorporated by the project to lessen impacts related to NO_x emissions during Phase I construction.

MM AQ-1 The following measures shall be adhered to during project grading and construction to reduce oxides of nitrogen (NO_x) from construction equipment for all phases of the project:

a. Heavy-duty diesel-powered construction equipment rated at greater than 50 horsepower shall be equipped with Tier 2 or better diesel engines.

b. The engine size of construction equipment shall be the minimum size.

c. The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest amount of equipment is operating at any one time.

d. Construction equipment shall be maintained in tune per the manufacturer's specifications.

e. Catalytic converters shall be installed on gasoline-powered equipment over 50 horsepower.

f. Electric equipment shall be utilized in lieu of diesel-powered equipment, where feasible.

Completion of Parking Structure (Building O) and Medical Office Building (Building P) Prior to Phase I Construction

At the time of report preparation, the approved parking structure (Building O) and medical office building (Building P) were under construction. The majority of the activity required to construct these buildings has been accomplished, and both buildings would be completed prior to commencement of Phase I construction. Emissions associated with the remaining phases of building construction are estimated for disclosure.

To complete parking structure construction, concrete work would be required in addition to interior assembly, including stud framing, plaster application, precast panels, curtain wall systems, and interior installation of elevators, stairs, and fire sprinkler systems. The majority of the concrete structure would not be painted. To estimate VOC emissions associated with the potential application of architectural coating, it was conservatively assumed that 20% of the interior, including striping, and 20% of the exterior walls would be painted compared to the

CalEEMod default methodology.[5] Site work would follow building construction and would include paving activities and fine grading.

It was assumed that the remaining phases of parking structure construction commenced in November 2013 and would be completed by the beginning of January 2014. Construction scheduling and equipment are included in Appendix A. Table 14 presents the estimated maximum daily emissions resulting from completion of Building O construction.

Table 14
Parking Structure (Building O) Estimated Maximum Daily Construction Emissions (pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Year 2013	51.72	33.92	30.04	0.04	3.04	2.49
Year 2014	51.38	40.64	25.38	0.04	2.32	1.83
Maximum daily emissions	51.72	40.64	30.04	0.04	3.04	2.49
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix A for complete results.
These estimates reflect control of fugitive dust required by SCAQMD Rule 403.

The completion of the medical office building (Building P) would require continued building construction of the interior and exterior, followed by fine grading and paving of the site. It was assumed that the remaining medical office building construction phases commenced in November 2013 and would be completed by the beginning of March 2014. Construction schedule, phasing, and equipment assumptions are included in Appendix A, along with the detailed estimated emissions results. Table 15 presents the estimated maximum daily emissions resulting from completion of Building P construction in 2013 and 2014.

[5] As it does for other nonresidential buildings, CalEEMod assumes that two times the floor area would be painted (e.g., interior walls and ceilings and exterior surfaces). However, most of the parking structure would be unpainted concrete. Thus, it is assumed that 20% of the area assumed by CalEEMod would be painted.

Table 15
Medical Office Building (Building P) Estimated Maximum Daily Construction Emissions (pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Year 2013	1.64	16.00	10.31	0.01	1.30	1.04
Year 2014	1.55	15.57	10.04	0.01	1.11	0.93
Maximum daily emissions	1.64	16.00	10.31	0.01	1.30	1.04
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix A for complete results.
These estimates reflect control of fugitive dust required by SCAQMD Rule 403.

As shown in Tables 14 and 15, estimated maximum daily emissions associated with the remaining construction phases of Buildings O and P would individually not exceed SCAQMD construction thresholds. Combined maximum daily emissions resulting from concurrent construction of these two buildings would not also exceed the SCAQMD thresholds. As stated above, construction of these two buildings would not overlap with construction of Phase I. Thus, the construction emissions shown in Table 13 would not be affected.

Phase IIa

Phase IIa would occur sometime between 2017 and 2024. Phase IIa includes the demolition of the 58,705-square-foot Building A structure and an approximately 100,000-square-foot mixed-use building on the Building A site. Buildout of the shell space (84 additional licensed beds) in the Phase I tower would most likely occur during this phase; however, it could occur during Phase I and is therefore analyzed as part of Phase I as a worst-case scenario. No new licensed beds would be proposed in the mixed-use building; as such, total licensed bed count at the end of Phase IIa would remain at 562.

Construction schedule and construction equipment are not known as this time, but estimated dates are needed for the purpose of calculating the construction emissions in CalEEMod. The analysis contained herein uses default equipment in CalEEMod and is based on the following worst-case, conservative assumptions because emissions from off-road equipment and motor vehicles would be higher if construction were to occur in the earlier years (duration of phases is approximate):

- Demolition (rooftop equipment removal and building razing): April 2017 (2 months)
- Grading: July 2017 (1 week)

- Trenching (underground infrastructure, building foundation, and concrete foundation): July 2017 (1.5 weeks)
- Building construction (building foundation systems, initial building framing, and major column installation; steel framing, exterior shell, and interior wall framing; exterior building shell, initial interior structures, and flooring systems; and site work, exterior site yard installations, and interior floor, wall, and ceiling): August 2017 (7.5 months)
- Architectural coating (interior construction, building commissioning, and exterior shell finishes): January 2018 (3.5 months)
- Paving: June 2018 (2 months).

The construction equipment mix and estimated hours of equipment operation per day used for the air emissions modeling of the project are shown in Table 16, Phase IIa Construction Equipment. For this analysis, it was assumed that heavy construction equipment would operate 5 days a week (22 days per month) during project construction. Table 16 also presents the estimated number of workers anticipated for each construction sequence. To estimate motor vehicle emissions generated by worker vehicles (i.e., light-duty trucks and automobiles), it was assumed that each worker would generate two one-way trips per day. Because no specific information regarding worker trips is known at this time, worker trips and trip distances were estimated using CalEEMod defaults.

In addition to construction equipment operation and worker trips, emissions from hauling trucks (dump trucks) and vendor trucks (delivery trucks) were estimated. Dump truck trips were assumed to be required during demolition, grading, trenching, and building construction phases and vendor trucks transporting concrete, steel, and other building materials were assumed to be required during the building construction phase. The lengths of these trips were estimated using CalEEMod defaults (worker trip length: 14.7 miles; vendor trip length: 6.9 miles; hauling trip length: 20 miles). Estimated daily worker and vendor trips and total estimated haul truck trips are provided in Appendix A. Because the only known information is that the Phase IIa mixed-use building would be 100,000 square feet and no other specific information is provided for export during Phase IIa grading, based on the estimated proportion from the square footage of development and the export details given during Phase I, it was assumed that the Phase IIa mixed-use building would be a maximum of three stories high and approximately 16,458 cubic yards of export and 2,058 haul trips would occur during Phase IIa.

Table 16
Phase IIa Construction Equipment

Construction Phase	Workers	Equipment	Quantity	Hours/Day
Demolition	15	Concrete/industrial saws	1	8
		Rubber-tired dozers	2	6
		Excavators	3	8
Grading	13	Graders	1	8
		Rubber-tired dozers	1	6
		Tractors/loaders/backhoes	2	7
		Excavators	1	8
Trenching	5	Excavators	1	8
		Tractors/loaders/backhoes	1	8
Building construction	18	Cranes	1	4
		Forklifts	2	7
		Generator sets	1	8
		Tractors/loaders/backhoes	2	6
		Welders	1	8
Architectural coating	5	Air compressors	2	6
Paving	8	Pavers	1	8
		Paving equipment	1	8
		Rollers	1	8

Implementation of the project would generate construction-related air pollutant emissions from three general activity categories: entrained dust, equipment and vehicle exhaust emissions, and architectural coatings. Entrained dust would result from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. To account for dust control measures to comply with SCAQMD Rule 403 in the calculations, it was assumed that the active sites would be watered at least three times daily, resulting in an approximately 61% reduction. Exhaust from internal combustion engines used by construction equipment and hauling trucks (dump trucks) and vendor trucks (delivery trucks) and worker vehicles would result in emissions of NO_x, VOC, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce VOC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings). To ensure these requirements are met, the City will require the project proponent to comply with SCAQMD Rule 403 and SCAQMD Rule 1113, which will be included in the project's conditions of approval.

Table 17, Phase IIa Estimated Maximum Daily Construction Emissions, presents the estimated maximum unmitigated daily construction emissions generated during construction of the project in each year and demolition of Building A.

Table 17
Phase IIa Estimated Maximum Daily Construction Emissions
(pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Year 2017	7.05	102.92	73.06	0.23	13.46	6.70
Year 2018	9.33	29.69	26.09	0.04	2.26	1.84
Maximum daily emissions	9.33	102.92	73.06	0.23	13.46	6.70
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	Yes	No	No	No	No

Notes: See Appendix A for complete results.
These estimates reflect control of fugitive dust required by SCAQMD Rule 403.

Maximum daily emissions of NO_x would occur during the demolition, grading, trenching, and a portion of building construction in 2017 as a result of exporting materials, off-road equipment operation, and on-road haul trucks. Fugitive dust and off-road equipment emissions during the grading and site demolition phase would generate the maximum daily $PM_{2.5}$ emissions in 2017. Maximum daily PM_{10} emissions would occur during building construction in 2017, and would primarily result from paved road dust generated by off-site haul trucks exporting waste to the closest landfill. The application of architectural coatings in 2017 would produce the maximum daily VOC emissions.

As shown in Table 17, daily construction emissions would not exceed the SCAQMD significance thresholds for VOC, CO, SO_x, PM_{10}, or $PM_{2.5}$ during construction in any of the construction years. Furthermore, construction-generated emissions would be temporary and would not represent a long-term source of criteria air pollutant emissions. In addition, the project would be required to comply with SCAQMD Rule 403 to control dust emissions generated during the demolition and other grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites approximately three times daily depending on weather conditions. Construction of the project, however, would exceed the daily construction emissions threshold for NO_x during Phase IIa of the project. As shown in Table 17, the maximum construction-generated NO_x emissions of 102.92 pounds per day would exceed the SCAQMD's quantitative significance threshold of 100 pounds per day. As such, Phase IIa of the project would result in a **potentially significant** impact to air quality.

Mitigation measure **MM AQ-1** (see Phase I) shall be incorporated by the project to lessen impacts related to NO_x emissions during Phase IIa construction.

Phase IIb

Phase IIb would occur sometime between 2024 and 2029. Phase IIb consists of a second new, estimated nine-story, 180-foot-tall, 600,000+-square-foot replacement bed tower, totaling 339 licensed beds (273 licensed beds relocated from Building B and 66 licensed beds relocated from Building D to the proposed replacement bed tower after the seismic upgrades are complete under Phase I). The relocation of 339 licensed beds would keep the number of licensed beds on campus at 562. Phase IIb focuses on relocating licensed beds and acute care services out of Building B and Building D to the new second tower because as of 2030, Buildings B and D will no longer be in compliance with SB 1953. Once the licensed beds are relocated to the new second hospital bed tower, Building B and Building D will be used for outpatient, skilled nursing, and support services and education (i.e., UCR program space). Phase IIb includes the existing parking structures (identified as Buildings I and J on Figure 3, Site Plan) to be demolished prior to the construction of the Phase IIb replacement bed tower and future construction of Phase IIc of the project. A total of 197,133 square feet of demolition would occur (the parking structure identified as Building I in Figure 3, Site Plan, is 96,084 square feet and the parking structure identified as Building J is 101,049 square feet). An addition of 38 licensed beds could occur as early as this phase and is therefore accounted for in the total licensed beds under this phase. As a worst-case assumption, total bed count at the end of Phase IIb would be 600 licensed beds. Some additional convenience parking could be included during this phase.

Construction schedule and construction equipment are not known as this time, but the estimated dates are needed for the purpose of calculating the construction emissions in CalEEMod. The analysis contained herein uses default equipment in CalEEMod and is based on the following worst-case, conservative assumptions because emissions from off-road equipment and motor vehicles would be higher if construction were to occur in the earlier years (duration of phases is approximate):

- Demolition (rooftop equipment removal and building razing): June 2024 (5 months)
- Grading: January 2025 (3 weeks)
- Trenching (underground infrastructure, building foundation, and concrete foundation): February 2025 (2 weeks)

- Building construction (building foundation systems, initial building framing, and major column installation; steel framing, exterior shell, and interior wall framing; exterior building shell, initial interior structures, and flooring systems; and site work, exterior site yard installations, and interior floor, wall, and ceiling): March 2025 (22 months)
- Architectural coating (interior construction, building commissioning, and exterior shell finishes): February 2027 (5 months)
- Paving: August 2027 (3 months).

The construction equipment mix and estimated hours of equipment operation per day used for the air emissions modeling of the project are shown in Table 18, Phase IIb Construction Equipment. For this analysis, it was assumed that heavy construction equipment would operate 5 days a week (22 days per month) during project construction. Table 18 also presents the estimated number of workers anticipated for each construction sequence. To estimate motor vehicle emissions generated by worker vehicles (i.e., light-duty trucks and automobiles), it was assumed that each worker would generate two one-way trips per day. Because no specific information regarding worker trips is known at this time, worker trips and trip distances were estimated using CalEEMod defaults.

In addition to construction equipment operation and worker trips, emissions from hauling trucks (dump trucks) and vendor trucks (delivery trucks) were estimated. Dump truck trips were assumed to be required during demolition, grading, trenching, and building construction phases and vendor trucks transporting concrete, steel, and other building materials were assumed to be required during the building construction phase. The lengths of these trips were estimated using CalEEMod defaults (worker trip length: 14.7 miles; vendor trip length: 6.9 miles; hauling trip length: 20 miles). Estimated daily worker and vendor trips and total estimated haul truck trips are provided in Appendix A. Because the only known information is that the Phase IIb hospital bed tower would be nine stories and 600,000+ square feet and no other specific information is provided for export during Phase IIb grading, based on the estimated proportion from the square footage of development and the export details given during Phase I, it was assumed that construction of the Phase IIb hospital bed tower would involve approximately 32,917 cubic yards of export and 4,114 haul trips.

Table 18
Phase IIb Construction Equipment

Construction Phase	Workers	Equipment	Quantity	Hours/Day
Demolition	15	Concrete/industrial saws	1	8
		Excavators	3	8
		Rubber-tired dozers	2	6
Grading	15	Excavators	1	8
		Graders	1	8
		Rubber-tired dozers	1	6
		Tractors/loaders/backhoes	3	8
Trenching	23	Excavators	1	8
		Tractors/loaders/backhoes	1	8
Building construction	5	Cranes	2	4
		Forklifts	2	8
		Generator sets	1	8
		Tractors/loaders/backhoes	3	7
		Welders	1	8
Architectural coating	10	Air compressors	2	6
Paving	8	Pavers	1	8
		Paving equipment	2	6
		Rollers	1	6

Implementation of the project would generate construction-related air pollutant emissions from three general activity categories: entrained dust, equipment and vehicle exhaust emissions, and architectural coatings. Entrained dust would result from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. To account for dust control measures to comply with SCAQMD Rule 403 in the calculations, it was assumed that the active sites would be watered at least three times daily, resulting in an approximately 61% reduction. Exhaust from internal combustion engines used by construction equipment and hauling trucks (dump trucks) and vendor trucks (delivery trucks) and worker vehicles would result in emissions of NO_x, VOC, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce VOC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings). To ensure that these requirements are met, the City will require the project proponent to comply with SCAQMD Rule 403 and SCAQMD Rule 1113, which will be included in the project's conditions of approval.

Table 19, Phase IIb Estimated Maximum Daily Construction Emissions, presents the estimated maximum unmitigated daily construction emissions generated during construction of the project in each year, including the demolition of the parking structures identified as Buildings I and J in Figure 3, Site Plan.

Table 19
Phase IIb Estimated Maximum Daily Construction Emissions
(pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Year 2024	1.87	16.33	20.57	0.03	2.30	0.95
Year 2025	3.91	35.58	51.76	0.17	10.53	5.00
Year 2026	1.85	15.26	23.16	0.05	1.47	0.81
Year 2027	27.57	22.39	35.48	0.07	1.98	1.17
Maximum daily	27.57	35.58	35.48	0.07	10.53	5.00
Pollutant threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix A for complete results.
These estimates reflect control of fugitive dust required by SCAQMD Rule 403.

Maximum daily emissions of NO_x would occur during the grading, trenching, and building construction phase in 2025 as a result of exporting materials, off-road equipment operation, and on-road haul trucks. Fugitive dust and off-road equipment emissions during the grading, trenching, and building construction phase in 2025 would generate the maximum daily $PM_{2.5}$ emissions. Maximum daily PM_{10} emissions would also occur during the grading, trenching, and building construction phase in 2025, and would primarily result from paved road dust generated by off-site haul trucks exporting waste to the closest landfill. The application of architectural coatings in 2027 would produce the maximum daily VOC emissions.

As shown in Table 19, daily construction emissions would not exceed the SCAQMD significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during construction in any of the construction years. According to SB 621 and CARB regulations for in-use diesel truck fleets, by January 1, 2023, nearly all trucks will need to have 2010 model-year engines or the equivalent, which will contribute to lowering NO_x emissions during the construction phases. Furthermore, construction-generated emissions would be temporary and would not represent a long-term source of criteria air pollutant emissions. In addition, the project would be required to comply with SCAQMD Rule 403 to control dust emissions generated during the demolition and other grading activities. Standard construction practices that would be employed to reduce

fugitive dust emissions include watering of the active sites approximately three times daily, depending on weather conditions.

Phase IIc

Phase IIc would occur sometime between 2030 and 2043. The addition of 38 licensed beds is proposed under Phase IIc but could occur in Phase IIb if need is demonstrated prior to 2030; therefore, the addition of 38 licensed beds is analyzed as part of Phase IIb as a worst-case scenario because emissions from off-road equipment and motor vehicles associated with the 38 licensed beds would be higher if construction were to occur in the earlier years. Total beds on the RCH campus would remain at 600 licensed beds under Phase IIc. It is expected that Phase IIc would include construction of ancillary services as necessary and construction of surface or structure parking as needed to support growth.

Long-range development as part of Phase IIc of the project could include future acute care expansions, parking structures, or other ancillary uses. Please see Section 1.4, Project Description, Phase IIc – 2030 to 2043, for a list of potential Phase IIc uses.

With the exception of parking structures and hotel facilities, as potential Phase IIc uses, acute care services, central utility plants, medical office buildings and clinics, the outpatient services building, education centers, dental clinics, imaging centers, pharmacies, wellness centers, physical therapy or rehabilitation centers, community centers, optometry services, and medical retail facilities would likely result in construction emissions similar to those from Phase IIa or Phase IIb of the project. No new licensed beds, which would result in additional vehicle trips, would be included in Phase IIc for the purposes of this analysis. Additionally, these uses would result in similar footprint, scale, and mass to that of the structures proposed in Phase IIa or Phase IIb.

The proposed hotel in Phase IIc would serve families visiting long-term patients at the hospital, thus reducing the trips from off-site hotels to and from the RCH site. However, at this time, only the general location of Phase IIc is known; there is no information on the approximate size of construction or possible demolition activities under Phase IIc. The project has not yet been defined for Phase IIc; therefore, criteria pollutant emissions for Phase IIc must be reviewed and assessed in a subsequent analysis. In order to verify that air quality impacts would not exceed the SCAQMD thresholds, mitigation measure **MM AQ-2**, which requires the preparation of a site-specific air quality technical report in conjunction with future discretionary actions for Phase IIc, would be implemented.

MM AQ-2 During the environmental review process for future discretionary permits for Phase IIc of the Riverside Community Hospital Expansion Project, an air quality technical report that includes project construction phasing, timing and operational details shall be analyzed using the current air quality model available from the South Coast Air Quality Management District (SCAQMD). Project emissions shall be modeled and then evaluated based on current SCAQMD thresholds. The technical analysis for Phase IIc shall be prepared to analyze construction and operational emissions.

If air quality impacts are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated to reduce impacts. Examples of standard construction mitigation measures include the following:

Consistent with SCAQMD Rule 403, it is required that fugitive dust generated by grading and construction activities be kept to a minimum with a goal of retaining dust on the site, by following the dust control measures listed below:

a. During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.
b. During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning, after work is completed for the day, and whenever winds exceed 15 miles per hour.
c. Soil stockpiled for more than 2 days shall be covered, kept moist, or treated with soil binders to prevent dust generation.
d. Speeds on unpaved roads shall be reduced to less than 15 miles per hour.
e. All grading and excavation operations shall be halted when wind speeds exceed 25 miles per hour.
f. Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.
g. If import/export of soil materials would be required, all trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be covered and/or a minimum 2 feet of freeboard shall be maintained.

h. At a minimum, at each vehicle egress from the project site to a paved public road, a pad consisting of washed gravel (minimum size: 1 inch) shall be installed and maintained in clean condition to a depth of at least 6 inches and extending at least 30 feet wide and at least 50 feet long (or as otherwise directed by the SCAQMD).
i. Any additional requirements of SCAQMD Rule 403 shall be reviewed and complied with.

The following measures shall be adhered to during project grading and construction to reduce emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) from construction equipment:

a. Heavy-duty diesel-powered construction equipment rated at greater than 50 horsepower shall be equipped with Tier 4 or better diesel engines.
b. The engine size of construction equipment shall be the minimum size.
c. The amount of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest amount of equipment is operating at any one time.
d. Construction equipment shall be maintained in tune per the manufacturer's specifications.
e. Catalytic converters shall be installed on gasoline-powered equipment over 50 horsepower.
f. Electric equipment shall be utilized in lieu of diesel-powered equipment, where feasible.
g. RCH shall use zero-VOC-content architectural coatings during project construction/application of paints and other architectural coatings to reduce ozone precursors. If zero-VOC paint cannot be utilized, the developer shall avoid application of architectural coatings during the peak smog season: July, August, and September. RCH shall procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings).

If air quality impacts for operational emissions for Phase IIc are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated to reduce impacts. Examples of standard operational mitigation measures include the following: reduce trips in passenger vehicles by patients,

visitors, or physicians/staff; enhance transportation management demand programs; and reduce energy usage.

Because future conditions (e.g., number and size of buildings to be constructed, construction schedule, construction equipment fleet mix, regulatory requirements) are speculative, it is not certain that implementation of **MM AQ-2** would reduce impacts to less than significant. Therefore, construction-related impacts to the air quality standards would be **potentially significant**.

7.3 Localized Significance Thresholds Analysis

Sensitive receptors are those more susceptible to the effects of air pollution than the population at large, The SCAQMD considers that sensitive receptors may include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). The closest off-site sensitive receptors to the project site include several residential areas, one elementary school, and three childcare centers or preschools. Evans Sports Complex, which comprises the athletic fields for Riverside Community College, was not identified as a sensitive receptor for this analysis because the typical users (college students) are considered healthy adults. Newman Park, located at the southeast corner of 14th Street and Magnolia Avenue, east of the hospital campus, is a small green space not highly used by children or the elderly, and it was not considered a sensitive receptor. Similarly, children and the elderly would be present at the adjacent Calvary Presbyterian Church; however, they would tend to be at the church during weekend services for a limited time, which is not likely to be concurrent with construction activity. Much of the neighboring area consists of commercial and other nonresidential land uses. In addition, the hospital buildings that house patients for longer-term care (i.e., buildings with licensed beds) would be considered sensitive receptors by the SCAQMD (McMillan, pers. comm. 2013). The names of the off-site receptors, except for residential areas, and the direction from the hospital site are shown in Table 20, Sensitive Receptors, for those receptors at which impacts were evaluated in the LST analysis.

Table 20
Sensitive Receptors

Name	Direction from Hospital
Grant Elementary School and Childcare Center	Northwest
Riverside Community College Daycare	Southeast
Eden Lutheran Preschool	Southwest
Calvary Presbyterian Church[a]	South

[a] As noted above, the Calvary Presbyterian Church would not be considered a sensitive receptor.

An LST analysis has been prepared to determine potential impacts to nearby sensitive receptors during construction. While the Calvary Presbyterian Church, located south of the project site boundary, is not considered a sensitive receptor, it was included as a nearby noncommercial receptor where children and the elderly may be present occasionally.

As indicated in the discussion of the thresholds of significance, the SCAQMD also recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ impacts as a result of construction activities to sensitive receptors in the immediate vicinity of the project site. The impacts were analyzed using methods consistent with those in the SCAQMD's *Final Localized Significance Threshold Methodology* (LST Methodology; SCAQMD 2008a). According to the LST Methodology, "Off-site mobile emissions from the project should NOT be included in the emissions compared to the LSTs" (SCAQMD 2008). Hauling of soils and construction materials is not expected to cause substantial air quality impacts to sensitive receptors along off-site roadways. Emissions from the haul trucks would be relatively brief in nature and would cease once the haul trucks pass through the main streets (Magnolia Avenue / Market Street and/or 14th Street) to State Route 91.

The SCAQMD's LST Methodology also includes thresholds for analyzing ambient air quality impacts due to the operational emissions from stationary sources. SCAQMD Rule 1303 (Requirements) and 1304 (Exemptions) include exemptions from dispersion modeling requirements of Regulation XIII (New Source Review) for specified low-emission combustion sources and emergency standby equipment, respectively. The combined hourly emissions from the three proposed boilers would be less than those shown in Rule 1303, Table A-1 as shown in Table 21; thus, when a permit application is filed for Authorities to Construct for the new boilers, the application would be exempt from the requirement to evaluate impacts on ambient air quality under Regulation XIII. Under Rule 1304, emergency standby equipment for nonutility electrical power generation is exempt from the modeling requirements of Rule 1303. Accordingly, the emissions from the new boilers and emergency generators would not likely to exceed the LSTs for operational emissions, and a quantitative analysis has not been prepared.

Table 21
Boiler Emissions Compared to Rule 1303 Screening Values

	NO_x	CO	PM_{10}
Exhaust Concentration (ppm)	9[a]	400[a]	—
Emission Factor (pound per million Btu)	0.011	0.296	0.0008[b]
Total Emissions (pounds per hour)	0.43	11.54	0.03
Rule 1303 Screening Values (pounds per hour)[c]	0.86	47.3	5.2

Sources:
[a] SCAQMD 2008b.
[b] EPA 1998.
[c] SCAQMD 2002.

Ambient NO_2, CO, PM_{10}, and $PM_{2.5}$ concentrations due to the construction of Phase I and Phase IIb of the project[6] were analyzed using the American Meteorological Society/EPA Regulatory Model (AERMOD) air quality dispersion model (Lakes Environmental 2013), Version 12345. AERMOD is approved for use by the SCAQMD for the purposes of performing an LST analysis. Details of the LST analysis are described in Appendix B.

Table 22, LST Modeling Results – Phase I, and Table 23, LST Modeling Results – Phase IIb, show the maximum NO_2, CO, PM_{10}, and $PM_{2.5}$ concentrations associated with the project at hospital buildings, nearby residential areas, and other sensitive receptors. The maximally impacted residential receptors and sensitive receptor (Grant Elementary School and childcare center) are located directly northwest of the project site. Selected dispersion modeling results are included in Appendix B. Sensitive receptors for the dispersion modeling were selected based on the location of the construction area and the proximity of the receptors.

[6] Construction emissions associated with Phase I and Phase IIb were evaluated as representative scenarios for the LST analysis. Construction emissions associated with Phase IIa were not evaluated in the LST analysis.

Table 22
LST Modeling Results – Phase I

Pollutant	Averaging Period	Modeled Impacts		LST Criteria		Exceeds Threshold?
		µg/m³	*ppm*	*µg/m³*	*ppm*	
Residential Receptors						
Nitrogen dioxide (NO_2)	1 hour	106	0.06	224	0.12	No
Carbon monoxide (CO)	1 hour	176	0.15	19,340	16.9	No
Carbon monoxide (CO)	8 hours	41	0.04	8,319	7.3	No
Respirable particulate matter (PM_{10})	24 hours	8.1	—	10.4	—	No
Fine particulate matter ($PM_{2.5}$)	24 hours	4.5	—	10.4	—	No
Hospital Receptors						
Nitrogen dioxide (NO_2)	1 hour	1,031	0.55	224	0.12	Yes
Carbon monoxide (CO)	1 hour	1,086	0.95	19,340	16.9	No
Carbon monoxide (CO)	8 hours	452	0.40	8,319	7.3	No
Respirable particulate matter (PM_{10})	24 hours	187.9	—	10.4	—	Yes
Fine particulate matter ($PM_{2.5}$)	24 hours	99.1	—	10.4	—	Yes
Other Sensitive Receptors						
Nitrogen dioxide (NO_2)	1 hour	242	0.13	224	0.12	Yes
Carbon monoxide (CO)	1 hour	508	0.44	19,340	16.9	No
Carbon monoxide (CO)	8 hours	116	0.10	8,319	7.3	No
Respirable particulate matter (PM_{10})	24 hours	18.3	—	10.4	—	Yes
Fine particulate matter ($PM_{2.5}$)	24 hours	10.7	—	10.4	—	Yes

Table 23
LST Modeling Results – Phase IIb

Pollutant	Averaging Period	Modeled Impacts		LST Criteria		Exceeds Threshold?
		µg/m³	*ppm*	*µg/m³*	*ppm*	
Residential Receptors						
Nitrogen dioxide (NO_2)	1 hour	75	0.04	224	0.12	No
Carbon monoxide (CO)	1 hour	148	0.13	19,340	16.9	No
Carbon monoxide (CO)	8 hours	61	0.05	8,319	7.3	No
Respirable particulate matter (PM_{10})	24 hours	6.5	—	10.4	—	No
Fine particulate matter ($PM_{2.5}$)	24 hours	6.1	—	10.4	—	No
Hospital Receptors						
Nitrogen dioxide (NO_2)	1 hour	557	0.30	224	0.12	Yes
Carbon monoxide (CO)	1 hour	1,449	1.27	19,340	17	No
Carbon monoxide (CO)	8 hours	586	0.51	8,319	7	No
Respirable particulate matter (PM_{10})	24 hours	262.8	—	10.4	—	Yes
Fine particulate matter ($PM_{2.5}$)	24 hours	135.2	—	10.4	—	Yes

Table 23
LST Modeling Results – Phase IIb

Pollutant	Averaging Period	Modeled Impacts		LST Criteria		Exceeds Threshold?
		µg/m³	*ppm*	*µg/m³*	*ppm*	
Other Sensitive Receptors						
Nitrogen dioxide (NO_2)	1 hour	84	0.04	224	0.12	No
Carbon monoxide (CO)	1 hour	302	0.26	19,340	16.9	No
Carbon monoxide (CO)	8 hours	28	0.02	8,319	7.3	No
Respirable particulate matter (PM_{10})	24 hours	11.8	—	10.4	—	Yes
Fine particulate matter ($PM_{2.5}$)	24 hours	3.4	—	10.4	—	No

As shown in Tables 22 and 23, the maximum 1-hour NO_2 and 24-hour PM_{10} and $PM_{2.5}$ modeled concentrations would exceed the threshold of significance established by the SCAQMD at sensitive receptors in the vicinity of the project site. The 1- and 8-hour CO concentrations would not exceed the thresholds of significance. As noted in Footnote 6, construction impacts associated with Phase IIa were not analyzed. Based on the results for Phase I and Phase IIb, it is conservatively assumed that there is a reasonable likelihood that the LSTs could be exceeded at one or more sensitive receptors. As shown in Tables 22 and 23, the maximum NO_2 PM_{10}, and $PM_{2.5}$ would tend to occur at the hospital itself, although exceedances would also occur at Grant Elementary School.

The maximum NO_2, PM_{10}, and $PM_{2.5}$ impacts would result only if (1) the amount of construction activity (e.g., demolition activity or graded area, number and types of equipment, hours of operation) assumed in this analysis actually occurred and (2) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day. As construction of the project is anticipated to result in an exceedance of the LSTs, the project would result in **significant** air quality impacts during the construction phase. The mitigation measures (**MM AQ-1** and **MM AQ-2**) identified previously would also reduce these NO_2, PM_{10}, and $PM_{2.5}$ ambient air quality impacts but are not expected to reduce the impacts to less than significant.

To minimize air quality impacts during all phases of construction, the following mitigation measure, **MM AQ-3**, should be implemented.

MM AQ-3 During construction of all phases of the project, the following mitigation measure shall be incorporated to reduce impacts resulting from the exceedance

of the South Coast Air Management District (SCAQMD) localized significance thresholds.

Consistent with South Coast Air Quality Management District (SCAQMD) Rule 403, it is required that fugitive dust generated by grading and construction activities be kept to a minimum with a goal of retaining dust on the site, by following the dust control measures listed below:

a. During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.
b. During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning, after work is completed for the day, and whenever winds exceed 15 miles per hour.
c. Soil stockpiled for more than 2 days shall be covered, kept moist, or treated with soil binders to prevent dust generation.
d. Speeds on unpaved roads shall be reduced to less than 15 miles per hour.
e. All grading and excavation operations shall be halted when wind speeds exceed 25 miles per hour.
f. Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.
g. If import/export of soil materials would be required, all trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be covered and/or a minimum 2 feet of freeboard shall be maintained.
h. At a minimum, at each vehicle egress from the project site to a paved public road, a pad consisting of washed gravel (minimum size: 1 inch) shall be installed maintained in a clean condition to a depth of at least 6 inches and extending at least 30 feet wide and at least 50 feet long (or as otherwise directed by the SCAQMD).
i. Any additional requirements of SCAQMD Rule 403 shall be reviewed and complied with.
j. The construction contractor or Riverside Community Hospital representative shall notify sensitive receptors when building demolition and grading

activities would occur so that sensitive residents could be kept indoors or other accommodations made for their comfort. The construction contractor shall post readily visible signage in publicly accessible areas along the property lines of the Riverside Community Hospital with a contact name and telephone number in the event that project construction would generate nuisance levels of air pollutants in the surrounding community. Action shall be taken within 4 hours after notification to determine the cause of the objectionable emissions and take corrective action.

The following measures shall be adhered to during project grading and construction to reduce emissions of oxides of nitrogen (NO_x) from construction equipment:

a. Heavy-duty diesel-powered construction equipment rated at greater than 50 horsepower shall be equipped with Tier 3 or better diesel engines.
b. The engine size of construction equipment shall be the minimum size.
c. The amount of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest amount of equipment is operating at any one time.
d. Construction equipment shall be maintained in tune per the manufacturer's specifications.
e. Catalytic converters shall be installed on gasoline-powered equipment over 50 horsepower.
f. Electric equipment shall be utilized in lieu of diesel-powered equipment, where feasible.

The emissions of fugitive PM_{10} and $PM_{2.5}$ are based on estimates per CalEEMod and the assumed efficiency of dust management practices. The improvement resulting from the additional fugitive dust mitigation measures is uncertain. Similarly, the effectiveness of the NO_x mitigation measures cannot be quantified. The estimated emission rates per CalEEMod are based on a general fleet of construction equipment and trucks consisting of the typical fleet mix in the year being analyzed. The specific benefits of using lower emitting equipment or the other NO_x mitigation measures cannot be determined because the CalEEMod fleet mix, particularly in distant future years, may already incorporate some lower-emitting units. Thus, the localized ambient air quality impacts during construction would be considered **significant**.

7.4 Operational Emissions

Following the completion of construction activities, the project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile and stationary sources including vehicular traffic generated by patients, visitors, physicians/staff, and emergency vehicles (i.e., ambulance), area sources (space heating, water heating, landscaping), diesel generators, and steam boilers. For purposes of this analysis, the emissions associated with buildout of Phase I of the project (2017) are compared to the baseline scenario (i.e., includes the existence of the medical office building (Building P) and the new parking structure (Building O) currently under construction and expected for completion in early 2014) and the emissions associated with buildout of Phase IIb of the project (2030) are also compared to the baseline scenario to determine the net operational emissions associated with the project. The operational emissions from Phase IIa are included in the emissions associated with buildout of Phase IIb of the project. Buildout of Phase IIc of the project is 2043; however, at this time, there is no specific land use defined for Phase IIc of the project. With the exception of hotel facilities, as potential Phase IIc uses, acute care services, central utility plants, medical office buildings and clinics, outpatient services building, education centers, dental clinics, imaging centers, pharmacies, wellness centers, physical therapy or rehabilitation centers, community centers, optometry services, and medical retail facilities would likely result in direct operational emissions similar to those from buildout of Phase I or Phase IIb of the project, as compared to the baseline scenarios, because similar energy-efficient technologies would be used and the scale and massing of these uses would likely be less than those of a hospital bed tower. Parking structures would not generate additional operational emissions because parking structures do not generate vehicle trips or other sources of air pollutants. The motor vehicles utilizing the parking structures and their associated emissions would be captured from the development on site. Therefore, operational emissions for Phase IIc must be reviewed and assessed in a subsequent analysis. To verify that air quality impacts would not exceed those allowed under the SCAQMD thresholds, mitigation measure **MM AQ-2**, which calls for the preparation of a site-specific air quality technical report, would be incorporated.

The RCH campus is currently developed with 328,921 square feet of hospital facilities with 373 licensed beds, 82,240 square feet of hospital facilities without beds, and 184,392 square feet of medical office buildings. Under the baseline conditions (existing plus approved development), the hospital facilities and licensed beds described above in the existing conditions remain the same; however, the medical office building would total 245,392 square feet. Existing parking structures are not part of the operational impacts discussion because they do not generate vehicle trips or other sources of air pollutant emissions. The trips by passenger vehicles utilizing the

parking structures and their associated emissions have already been captured from the development on site.

Vehicular Traffic

The project would impact air quality through the vehicular traffic generated by the project. Emissions associated with project-generated daily traffic were modeled using trip-generation rates from the Traffic Impact Analysis (Kimley-Horn 2014), which considered 30% of the trips to reflect internal capture (e.g., non-vehicular trips between medical offices and hospital buildings). CalEEMod was utilized to estimate daily emissions from proposed vehicular sources. CalEEMod default data, including temperature, trip characteristics, variable start information, and trip distances, were conservatively used for the model inputs.

Project-related traffic was assumed to be composed of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2014 were used to estimate emissions associated with the baseline scenario, while 2017 and 2030 emissions factors were used to estimate emissions associated with the Phase I buildout and Phase IIb buildout of the project, respectively.

Area Sources

In addition to estimating mobile source emissions, CalEEMod was also used to estimate emissions from the project's area sources, which include other natural gas combustion, landscaping, and architectural coatings for maintenance of buildings. Refer to Appendix A for more information.

Stationary Sources

Central Plant

The existing central plant contains three natural-gas-fired steam boilers. The existing central plant also contains three emergency standby generators, each rated at 750 kilowatts. The generators are for emergency backup only and operate during limited hours for testing and maintenance and during electrical power outages. Run time for code-required testing is less than the allowable annual hours in the SCAQMD permits to operate. Replacement boilers and additional emergency generators would be installed as part of the project. Details pertaining to the boilers and emergency generators are described below.

Steam Boilers – One of the central plant's three steam boilers is rated at 350 boiler horsepower (BHP) and has been used for 20 years, the second steam boiler is 250 BHP and has been used for 15 years, and the third steam boiler is 250 BHP and has been used for 30 years. The steam boilers provide 65 pounds per square inch steam to all four buildings of the existing hospital. The boilers operate continuously; however, as the load changes throughout the day and time of year, the loading and quantity of boilers operating varies. During the winter, RCH uses one boiler fully loaded with a second boiler approximately 20% loaded. The boiler system proposed would allow for the replacement of the existing steam boilers in the existing central plant. The boilers will be provided to meet all applicable SCAQMD requirements.

The new heating system proposed for the hospital expansion consists of dual-fuel (natural gas with fuel oil backup), high-pressure steam boilers, with low-NO_x emissions limited to 9 ppm (equivalent to 0.011 pounds per million Btu), with shell and tube heat exchangers for domestic and heating hot water within the new central plant. The new steam boilers would also backfeed the existing Building C systems and the existing central plant, allowing for the removal of the existing boiler systems. RCH proposes four 350 BHP fire-tube steam boilers, with one of the boilers as standby. The new central plant will require a new natural gas service to feed the boilers (CCRD 2013).

Separate fuel usage information for the existing boilers was not available, and the specific operating regime (daily or annual operating hours and load) for the new boilers is not known. The historical natural gas usage for RCH includes the fuel for the boilers among other uses, and the future fuel usage was assumed to increase proportionately with the building area as the hospital is expanded; that is, fuel usage would increase as the building area increases. For the new boilers, this assumption is likely to be conservative because the new boilers would be more efficient than the 15- to 30-year-old boilers currently in use. The historical annual average natural gas usage for 2009 to 2012 was used to develop a custom natural gas usage rate in units of 1,000 Btu per square foot of hospital buildings as an input to CalEEMod. The CalEEMod default natural gas usage was applied to the medical office buildings. The NO_x emission factor in CalEEMod is greater than the emission limit in the SCAQMD permits to operate. The CO emission factor in CalEEMod is less than the emission limit in the SCAQMD permits to operate; however, the SCAQMD limit is much higher than typical boilers with low-NO_x boilers would actually operate. Accordingly, it is assumed that this approach would conservatively estimate the emissions for the existing and replacement boilers. Refer to Appendix A for additional information and detailed emission calculations.

Emergency Generators – RCH currently has three existing emergency generators, which are assumed to remain on site. The analysis included in this report evaluates the emission from the

new generators only because the operation of the existing generators will not change (i.e., their emissions would remain the same as the current levels). Operational emissions under the project would result from intermittent use of diesel-powered emergency generators for maintenance and testing purposes. Under current plans for Phase I, two 1,500-kilowatt emergency generators would be installed. No plans have been made for additional emergency generators for Phase IIb; however, it is assumed that two additional generators would be installed to provide standby power for the Phase IIb hospital tower. Each generator is assumed to run for testing and maintenance up to 1 hour each week, for a total of 50 hours per year. To minimize daily emissions, no more than two units would be operated for maintenance and testing purposes on a single day. Generator engines would meet the EPA standards for Tier 2 engines and 0.15 gram of particulate matter per horsepower-hour as required by the CARB ATCM for new and in-use stationary diesel engines. The engines would also be required to use ultra-low-sulfur diesel fuel with a maximum sulfur content of 15 ppm by weight. The estimated emissions from the emergency generator engines, which are based on compliance with the Tier 2 engine standards and use of ultra-low-sulfur diesel fuel. Refer to Appendix A for additional information and detailed emission calculations.

Baseline Operational Emissions Summary

The estimation of operational area source emissions generated under existing (baseline) conditions was based on the hospital with licensed beds by total area (i.e., square footage) and number of hospital licensed beds, the hospital without beds by total area (i.e., square footage), and the medical office building by total area (i.e., square footage) that would be in operation prior to release of the Draft EIR. That is, the new medical office building (Building P), which is currently under construction, was included in the baseline for the purpose of estimating the associated emissions. The new parking structure (Building O), which is also currently under construction, was not included because it would not generate new vehicle trips or other sources of air pollutants. The 2009 to 2012 data on energy usage provided by RCH was used and converted to site-specific energy factors for hospital uses. Default CalEEMod energy factors were used for the medical office buildings. Vehicle trip generation was based on the rates by land use type in the Traffic Impact Analysis for the project (Kimley-Horn 2014). Table 24, Baseline Conditions (Year 2014) Estimated Maximum Daily Operational Emissions, presents the maximum daily area and vehicle source emissions under baseline conditions. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A.

Table 24
Baseline Conditions (Year 2014) Estimated Maximum Daily Operational Emissions (pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area source emissions	19.00	16.60	14.02	0.10	1.26	1.26
Vehicular source emissions	64.88	221.47	689.26	1.41	105.97	30.52
Combined total emissions	83.88	238.07	703.28	1.51	107.23	31.78

Notes: See Appendix A for complete results.
Baseline conditions include Building P (medical office building), which is currently under construction. Building O (parking structure) was not part of baseline operational emissions calculation because parking structures do not generate vehicle trips or other sources of air pollutants. The motor vehicles utilizing the parking structures and their associated emissions have already been captured from the development on site.

Alternative Baseline Conditions Scenario without Medical Office Building (Building P)

As described under the construction emissions analysis, Buildings O and P were under construction at the time this report was prepared. The medical office building (Building P; 61,000 square feet) was included in the baseline conditions described above; the parking structure (Building O; 385,500 square feet) was not included in the baseline conditions as it was not anticipated to generate vehicle trips or other sources of air pollutant emissions. An alternative baseline scenario was developed to present emissions associated with baseline conditions that do not include development that is under construction. Accordingly, the alternative baseline conditions assumes operation of 373 hospital beds (328,921 square feet), 82,240 square feet of hospital use, and 184,392 square feet of medical office building (a 61,000-square-foot reduction from the baseline scenario, which assumed 245,392 square feet). Table 25, Alternative Baseline Conditions (Year 2014) Estimated Maximum Daily Operational Emissions, presents the maximum daily area and vehicle source emissions under alternative baseline conditions assuming that the 61,000-square-foot medical office building (Building P) is not in operation yet. Details of the emission calculations are provided in Appendix A.

Table 25
Alternative Baseline Conditions (Year 2014) Estimated Maximum Daily Operational Emissions (pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area source emissions	17.69	16.54	13.96	0.10	1.26	1.26
Vehicular source emissions	58.48	202.56	627.76	1.29	97.21	27.99
Combined total emissions	76.17	219.10	641.72	1.39	98.47	29.25

Notes: See Appendix A for complete results.
Alternative baseline conditions do not include Building P (medical office building), which is currently under construction. Building O (parking structure) was also not part of the alternative baseline operational emissions calculation because parking structures do not generate vehicle trips or other sources of air pollutants. The motor vehicles utilizing the parking structures and their associated emissions have already been captured from the development on site.

Descriptions of the scenarios under Phase I and under Phase IIb (which includes prior construction under Phase I and Phase IIa) and emissions estimates for mobile and area source emissions for these phases are provided below. It should be noted that construction of the new buildings would operate as the same hospital-related land uses on site, provide similar facilities, and serve essentially the same users as the existing buildings do.

Project Operational Emissions Summary

Phase I

Phase I of the project includes construction of a new, 251,500-square-foot, seven-story hospital bed tower, central plant construction, removal of 69 parking spaces, seismic upgrades to existing Building B, and the demolition of the existing 61,135-square-foot Building N (Medical Office Building 1) to accommodate the new hospital bed tower. Total employees/staff at the end of Phase I would be 2,290 (RCH currently employs 1,960 employees; an additional 330 estimated employees would be needed to serve the new tower). Operations on the RCH campus after the Phase I development (Year 2017) would total 580,421 square feet of hospital facilities with up to 562 hospital licensed beds, 82,240 square feet of hospital facilities without beds, and 184,257 square feet of medical office buildings. Table 26, Phase I (Year 2017) Estimated Maximum Daily Operational Emissions, presents the maximum daily area, emergency generators, and vehicle source emissions after construction completion of Phase I of the project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A. Emissions estimated from the baseline emissions in Year 2014 (refer to Table 224) are compared to the emissions scenario for Phase I of the project (Year 2017) to illustrate the net change in emissions associated with implementation of Phase I of the project.

Table 26
Phase I (Year 2017) Estimated Maximum Daily Operational Emissions
(pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area source emissions	25.07	26.54	22.38	0.16	2.02	2.02
Emergency generators[a]	2.24	42.57	24.27	0.05	1.40	1.37
Vehicular source emissions	58.03	199.03	627.84	1.68	125.36	35.31
Combined total emissions	85.34	268.14	674.49	1.89	128.78	38.70
Baseline emissions[b]	83.88	238.07	703.28	1.51	107.23	31.78
Net change in emissions	1.46	30.07	(28.79)	0.38	21.55	6.92

Table 26
Phase I (Year 2017) Estimated Maximum Daily Operational Emissions
(pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Pollutant threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Note: See Appendix A for detailed results.

[a] Each emergency generator unit would be tested for up to 1 hour each week. Assume both generators would be tested on a single day.

[b] Baseline emissions include Building P (medical office building), which is currently under construction. Building O (parking structure) was not part of baseline operational emissions calculation because parking structures do not generate vehicle trips or other sources of air pollutants. The motor vehicles utilizing the parking structures and their associated emissions have already been captured from the development on site.

As shown in Table 26, the net change in combined daily area and vehicular source emissions would not exceed the SCAQMD operational thresholds for VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. While the project would increase the number of patients, visitors, and physicians/staff and the square footage of buildings relative to existing conditions, the emissions of several air pollutants would decrease over the next 3 years. This reduction would occur, in part, because more stringent motor vehicle emission standards would reduce total emissions as older, high-emitting vehicles are replaced with newer, cleaner vehicles. Other sources of VOC emissions, however, such as consumer products and architectural coatings for building maintenance, would increase because the estimated emissions from these sources are a function of building area, which would increase. Overall, however, the net change indicates a reduction in emissions of some pollutants because motor vehicle emissions dominate and per vehicle trip emissions will decrease over time due to fleet turnover and various regulations compared to current levels.

Alternative Phase I

Under the alternative Phase I scenario, construction of the 61,000-square-foot medical office building (Building P) would be completed during Phase I, and the associated emissions were evaluated with those for the other buildings that would be in operation at the completion of Phase I in 2017. As with the alternative baseline conditions, the alternative Phase I scenario assumes that Building P is not included in baseline conditions. Under Phase I conditions (analyzed above), Building P was included in the baseline as well as in Phase I. This alternative scenario is performed to present the difference in the net change if medical office building (Building P) were assumed to be in Phase I only instead of the baseline conditions.

Alternative Phase I of the project includes construction of a new, 251,500-square-foot, seven-story hospital bed tower, central plant construction, removal of 69 parking spaces, seismic upgrades to the existing Building B, the demolition of the existing 61,135-square-foot Building N (Medical Office Building 1) to accommodate the new hospital bed tower, and operation of the 61,000-square-foot medical office building (Building P).

Operations on the RCH campus after the alternative Phase I development (Year 2017) would total 580,421 square feet of hospital facilities with up to 562 hospital licensed beds, 82,240 square feet of hospital facilities without beds, and 245,257 square feet of medical office buildings. The alternative baseline conditions assumes operation of 373 hospital beds (328,921 square feet), 82,240 square feet of hospital use, and 184,392 square feet of medical office building.

Table 27, Alternative Phase I (Year 2017) Estimated Maximum Daily Operational Emissions, presents the maximum daily area, emergency generators, and vehicle source emissions after construction completion of alternative Phase I of the project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A. Emissions estimated from the alternative baseline emissions in Year 2014 (refer to Table 25) are compared to emissions scenario for the alternative Phase I of the project (Year 2017) to illustrate the net change in emissions associated with implementation of alternative Phase I of the project.

Table 27
Alternative Phase I (Year 2017) Estimated Maximum Daily Operational Emissions (pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area source emissions	26.29	26.60	22.44	0.16	2.02	2.02
Emergency generators[a]	2.24	42.57	24.27	0.05	1.40	1.37
Vehicular source emissions	63.01	213.41	675.74	1.80	134.04	37.75
Combined total emissions	91.54	282.58	722.45	2.01	137.46	41.14
Alternative baseline emissions[b]	76.17	219.10	641.72	1.39	98.47	29.25
Net change in emissions	15.27	63.48	80.73	0.62	38.99	11.89
Pollutant threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	Yes	No	No	No	No

Note: See Appendix A for detailed results.

[a] Each emergency generator unit would be tested for up to 1 hour each week. Assume both generators would be tested on a single day.

[b] Building P (medical office building) is included in alternative Phase I; therefore, it is not included in the alternative baseline emissions as it is currently under construction. Building O (parking structure) was not part of the alternative baseline emissions or alternative Phase I because parking structures do not generate vehicle trips or other sources of air pollutants. The motor vehicles utilizing the parking structures and their associated emissions have already been captured from the development on site.

As shown in Table 27, the net change in combined daily area and vehicular source emissions would not exceed the SCAQMD operational thresholds for VOC, CO, SO_x, PM_{10}, and $PM_{2.5}$. However, the net change in NO_x emissions would exceed the SCAQMD threshold.

It was conservatively assumed that two emergency generators would be tested for 1 hour each on a single day. If actual emergency generator operation for maintenance or testing were limited to one unit per day, or two units per day for a total of 1 hour (30 minutes each), NO_x emissions associated with emergency generators would be reduced by 50%, or 21.29 pounds per day of NO_x. This condition would reduce the net change in NO_x emissions to below the SCAQMD threshold.

Phase IIa and Phase IIb

Construction of Phase IIa project components would occur sometime between 2017 and 2024 and would consist of the demolition of Building A since it is not in compliance with SB 1953 and can no longer house acute care services. An approximately 100,000-square-foot mixed-use building is proposed on the Building A site. In addition, the buildout of the shell space (84 additional licensed beds) in the Phase I tower would most likely occur during this phase (or earlier if necessary). Once the tower has been built, the maximum bed capacity on campus would be 562 licensed beds. Additional surface or structure parking is also anticipated to be needed in this phase to support the new space.

Construction of Phase IIb project components would occur sometime between 2024 and 2029 and would consist of a second new, estimated nine-story, 180-foot tall, 600,000+-square-foot replacement bed tower, totaling 339 licensed beds (273 licensed beds relocated from Building B and 66 licensed beds relocated from Building D to the proposed replacement bed tower after the seismic upgrades are complete under Phase I). The relocation of 339 licensed beds would keep the number of licensed beds on campus at 562. The addition of 38 licensed beds could occur in this phase if need is demonstrated prior to 2030. Phase IIb focuses on relocating licensed beds and acute care services out of Building B and Building D to the new second tower because as of 2030, Buildings B and D will no longer be in compliance with SB 1953. Once the licensed beds are relocated to the second new hospital bed tower, Building B and Building D will be used for outpatient, skilled nursing, and support services and education (i.e., UCR program space). Phase IIb includes demolishing the existing parking structures (identified as Buildings I and J on Figure 3, Site Plan) prior to the construction of the Phase IIb replacement bed tower and future construction of Phase IIc of the project. Some additional convenience parking could be included during this phase.

Operation on the RCH campus after the Phase IIb development (Year 2030) would total 962,950 square feet of hospital facilities with up to 600 hospital licensed beds, 241,006 square

feet of hospital facilities without beds, and 345,392 square feet of medical office buildings. Table 28, Phase I, Phase IIa, and Phase IIb (Year 2030) Estimated Maximum Daily Operational Emissions, presents the maximum daily area, emergency generators, and vehicle source emissions after construction completion through Phase IIb of the project (includes Phase I and Phase IIa). The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A. Emissions estimated from the baseline emissions in Year 2014 (refer to Table 24) are compared to the emissions scenario for Phase IIb of the project (Year 2030) to illustrate the net change in emissions associated with the project's operations at the completion of Phase IIb of the project, including modifications associated with Phase I and Phase IIa.

Table 28
Phase I, Phase IIa, and Phase IIb (2030) Estimated Maximum Daily Operational Emissions (pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area source emissions	45.83	48.24	40.64	0.29	3.67	3.67
Emergency generators[a]	2.24	42.57	24.27	0.05	1.40	1.37
Vehicular source emissions	52.23	128.76	554.68	2.43	178.19	49.96
Combined total emissions	100.30	219.57	619.59	2.77	183.26	55.00
Baseline emissions[b]	83.88	238.07	703.28	1.51	107.23	31.78
Net change in emissions	16.52	(18.50)	(83.69)	1.26	76.03	23.22
Pollutant threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Note: See Appendix A for detailed results.

[a] Each emergency generator unit would be tested for up to 1 hour each week. Assume no more than two generators would be tested on a single day.

[b] Baseline emissions include Building P (medical office building), which is currently under construction. Parking structures were not included in operational emissions calculations because parking structures do not generate vehicle trips or other sources of air pollutants. The motor vehicles utilizing the parking structures and their associated emissions have already been captured from the development on site.

As shown in Table 28, the net change in combined daily area and vehicular source emissions would not exceed the SCAQMD operational thresholds for VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. While the project would increase the number of patients, visitors, and physicians/staff and the square footage of buildings relative to existing conditions, the emissions of several air pollutants would decrease over the next 16 years. This reduction would occur, in part, because more stringent motor vehicle emission standards would reduce total emissions as older, high-emitting vehicles are replaced with newer, cleaner vehicles. Other sources of VOC emissions, however, such as consumer products and architectural coatings for building maintenance, would increase because the estimated emissions from these sources are a function of building area, which would increase. Overall, however, the net change indicates a

reduction in emissions of some pollutants because motor vehicle emissions dominate and per vehicle trip emissions will decrease over time due to fleet turnover and various regulations compared to current levels.

The following alternative conditions scenario assumes operation of the same land uses and square footage as Phase IIb operational conditions (1,203,956 square feet of hospital facilities and 345,392 square feet of medical office buildings), but uses the alternative baseline conditions, which do not include medical office building (Building P; 411,161 square feet of hospital facilities and 184.392 square feet of medical office buildings), to determine the net change. Table 29, Phase I, Phase IIa, and Phase IIb (2030) Estimated Maximum Daily Operational Emissions Compared to Alternative Baseline Conditions, presents the maximum daily area, emergency generators, and vehicle source emissions after completion of Phase IIb construction (Table 28) and compares it to the alternative baseline conditions emissions (Table 25). The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A.

Table 29

Phase I, Phase IIa, and Phase IIb (2030) Estimated Maximum Daily Operational Emissions Compared to Alternative Baseline Emissions (pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area source emissions	45.83	48.24	40.64	0.29	3.67	3.67
Emergency generators[a]	2.24	42.57	24.27	0.05	1.40	1.37
Vehicular source emissions	52.23	128.76	554.68	2.60	178.18	49.96
Combined total emissions	100.30	219.57	619.59	2.94	183.25	55.00
Alternative baseline emissions[b]	76.17	219.10	641.72	1.39	98.47	29.25
Net change in emissions	24.13	0.47	(22.13)	1.55	84.78	25.75
Pollutant threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold exceeded?	No	No	No	No	No	No

Note: See Appendix A for detailed results.

[a] Each emergency generator unit would be tested for up to 1 hour each week. Assume both generators would be tested on a single day.

[b] Building P (medical office building) is not included in the alternative baseline emissions. Building O (parking structure) was not part of emission calculations because parking structures do not generate vehicle trips or other sources of air pollutants. The motor vehicles utilizing the parking structures and their associated emissions have already been captured from the development on site.

As shown in Table 29, the net change in daily area and vehicular source emissions would not exceed the SCAQMD operational thresholds for VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$.

Phase IIc

Buildout of Phase IIc of the project will be in 2043. Total licensed beds on the RCH campus would remain at 600 beds. However, at this time, there is no specified use selected for Phase IIc of the project. It is expected that Phase IIc would include construction of ancillary services as necessary and construction of surface or structure parking as needed to support growth.

Long-range development as part of Phase IIc of the project could include future acute care expansions, parking structures, or other ancillary uses. Please see Section 1.4, Project Description, Phase IIc – 2030 to 2043, for a list of potential Phase IIc uses.

As previously mentioned, with the exception of hotel facilities as potential Phase IIc uses, acute care services, central utility plants, medical office buildings and clinics, outpatient services building, education centers, dental clinics, imaging centers, pharmacies, wellness centers, physical therapy or rehabilitation centers, community centers, optometry services, and medical retail facilities would likely result in net operational emissions similar to those from buildout of Phase I or Phase IIb of the project as compared to the baseline scenarios because similar energy-efficient technologies would be used and the scale and massing of these uses would likely be less than those of a hospital bed tower. The proposed hotel would serve families visiting long-term patients at the hospital, thus reducing the trips from off-site hotels to and from the RCH site. Parking structures would not generate additional operational emissions because parking structures do not generate vehicle trips or other sources of air pollutants. The motor vehicles utilizing the parking structures and their associated emissions would be captured from the development on site.

The details of specific locations and size of facilities in the project has not yet been defined for Phase IIc and, therefore, operational emissions for Phase IIc must be reviewed and assessed in a subsequent analysis. To verify that air quality impacts would not exceed the SCAQMD thresholds, mitigation measure **MM AQ-2** described above, which calls for the preparation of a site-specific air quality technical report, would need to be incorporated.

Because it is unknown whether implementation of **MM AQ-2** would result in less than significant impacts, impacts to the air quality standards would be **potentially significant**.

7.5 Toxic Air Contaminants

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as TACs or hazardous air pollutants. TACs are defined as substances that may cause or contribute to an increase in deaths or serious

illnesses or that may pose a present or potential hazard to human health. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program, and is aimed at hazardous air pollutants that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal hazardous air pollutants, and is adopting appropriate control measures for sources of these TACs. As examples, TACs include acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter. Some of the TACs are groups of compounds that contain many individual substances (for example, copper compounds and polycyclic organic matter).

The greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks, which may have associated health impacts to sensitive receptors. The closest sensitive receptors are the hospital uses on site. There are several schools, childcare centers/preschools, and parks located in the vicinity of the project site, in addition to residences. The nearest residences (located adjacent to 14th Street, west of Brockton Avenue) would be approximately 435 feet from the nearest construction area (Phase I hospital bed tower). The nearest school (Grant Elementary School, which also houses a childcare center) would be approximately 285 feet from the construction area (Phase I hospital bed tower). The childcare center at Riverside Community College on Magnolia Avenue and 15th Street would be approximately 560 feet from the construction area (Phase IIc). A small park (Newman Park) is located at the southeast corner of Magnolia Avenue and 14th Street, approximately 190 feet from the nearest construction point (Phase IIa). Evans Sports Complex is located south of the Calvary Presbyterian Church, approximately 450 feet away from the location of Phase IIc construction.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends an incremental cancer risk threshold of 10 in 1 million. "Incremental cancer risk" is the likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 70-year lifetime will contract cancer based on the use of standard risk-assessment methodology. Construction of Phases I, IIa, and IIb will last a total of approximately 7 years with construction of any individual phase not expected to last more than approximately 3 years and each phase potentially separated by several years. Furthermore, the construction areas will be in different locations throughout the RCH campus such that the length of time in proximity to any individual off-site receptor will be relatively limited. Accordingly, an accurate accounting of the TAC emission rates and their locations in an air quality dispersion model over the entire construction period would not be practical. The project would require the use of heavy-duty construction equipment, which is subject to a CARB ATCM for in-use diesel

construction equipment to reduce diesel particulate emissions, and it would involve use of diesel trucks, which are also subject to a CARB ATCM, for hauling demolition debris and soil and delivering concrete and building materials. In the future phases (later portions of Phase I and Phases IIb and IIc), much of the equipment will be equipped with Tier 4 engines, which are equipped with diesel particulate filters that reduce the engine emissions by 85% or more. Similarly, all 2007 and later model year heavy-duty trucks are equipped with diesel particulate filters. Thus, the emissions of diesel particulate matter from construction equipment and trucks will be substantially lower than that of current models, which would reduce their contribution to the long-term health effects associated with construction of the proposed project. For these reasons, the cancer risk associated with project construction is not expected to exceed the incremental cancer risk threshold of 10 in 1 million. As such, the exposure of sensitive receptors to project-related TAC emission impacts during operation of the project would be **less than significant**.

The replacement boilers and emergency generators would be subject to permitting by the SCAQMD. At the time of this assessment, sufficient information, such as equipment specifications, stack characteristics (height, diameter, exhaust flow rate and temperature), building dimensions, and location of these units, was not available to perform a quantitative assessment of the health impacts of the boilers and emergency generators. As part of the permitting process, however, the SCAQMD will evaluate project compliance with Rule 1401, New Source Review of Toxic Air Contaminants. Rule 1401 establishes acceptable risk levels and emission control requirements for new and modified facilities that may emit additional TACs. Under Rule 1401, permits to operate may not be issued when emissions of TACs result in a maximum incremental cancer risk greater than 1 in 1 million without application of best available control technology for toxics (T-BACT), or a maximum incremental cancer risk greater than 10 in 1 million with application of T-BACT, or a health hazard index (chronic and acute) greater than 1.0 (SCAQMD 2010). The human health risk analysis is based on the time, duration, and exposures expected. T-BACT will be determined on a case-by-case basis; however, examples of T-BACT include diesel particulate filters for stationary engines and oxidation catalysts for natural-gas-fired boilers. The emergency generators would be operated for a limited time, would meet the required emission rates for diesel particulate matter at the time of installation, and must be demonstrated to meet the requirements of Rule 1401 before the SCAQMD can issue the permits to construct. The boilers will be fueled with natural gas, which generally results in low TAC emissions and associated health effects, which must be demonstrated before the SCAQMD can issue the permits to construct. In addition, the TAC emissions from the replacement boilers would offset by the removal of older, less efficient boilers. As such, the exposure of sensitive receptors to project-related TAC emission impacts during operation of the project would be **less than significant**.

Hazardous Medical Materials

The existing hospital campus currently handles acutely hazardous medical materials that are classified as TACs. The majority of these materials are routinely used in laboratories, medical offices and operating rooms, and for cleaning and maintenance activities, and they are handled in relatively small quantities (e.g., 1 gallon or less). RCH currently has a hazardous materials business emergency plan that reports the following activities conducted at the project site: handling hazardous materials, owning and operating an underground storage tank, generating hazardous waste, and recycling more than 100 kilograms per month of excluded or exempted recyclable materials.

Implementation of the project could increase the amount of acutely hazardous medical materials. Prior to construction, RCH will prepare a hazardous substance management, handling, storage, disposal, and emergency response plan to be followed during construction that will ensure adherence to the construction specifications and applicable regulations regarding hazardous materials and hazardous waste, including disposal, and will ensure that construction of the project will not create a significant hazard to the public or the environment.

Prior to certificate of occupancy issuance for Phases I and IIa, and then again after Phases IIb and IIc, RCH will update its hazardous materials and waste management plan and hazardous materials business emergency plan to reflect transport, storage, use, and disposal of hazardous materials following construction of each phase of the project. These updates would include the use of additional chemicals currently used at the hospital as well as any new chemicals required to operate the project's components. The updated documents will be submitted to County of Riverside Department of Environmental Health. All chemicals will be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (22 CCR 4.5).

Additionally, in accordance with the 40 CFR 112, prior to certificate of occupancy issuance for Phases I, IIa, IIb, and IIc, RCH will update its spill prevention, control, and countermeasures plan.

Certain operations that would result in small emissions, including those that may involve TACs, are exempted from the requirement to obtain a Permit to Operate from the SCAQMD. As applied to the hospital, SCAQMD Rule 219 (Equipment Not Requiring a Written Permit Pursuant to Regulation II) exempts laboratory testing for chemical and physical analysis; vacuum-producing devices used in laboratory operations; hoods, stacks, or ventilators; and hand application of solvents for cleaning purposes, including but not limited to the use of rags,

daubers, swabs, and squeeze bottles. To date, the SCAQMD has not required a Permit to Operate for such existing operations at the hospital because the emissions (if any) are too small to raise health concerns or result in potentially significant air quality impacts under CEQA. Thus, it is expected that the exemptions would continue to apply to minor use of solvents, cleaning solutions, and other TAC-containing chemicals under the project. Based on these exemptions and the current hazardous materials management procedures described above, the exposure of sensitive receptors to project-related TAC emission impacts during operation of the project would be **less than significant**.

7.6 Carbon Monoxide Hotspots

Mobile source impacts occur basically on two scales of motion. Regionally, project-related travel will add to regional trip generation and increase the vehicle-miles traveled within the local airshed and the SCAB. Locally, project traffic will be added to the City roadway system near the project area. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing.

CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors such as residents, school children, hospital patients, and the elderly. Typically, high CO concentrations are associated with roadways or intersections operating at an unacceptable level of service (LOS). Projects contributing to adverse traffic impacts may result in the formation of such CO hotspots. To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The project's Traffic Impact Analysis (Kimley-Horn 2014) evaluated whether there would be a decrease in LOS (i.e., increase in congestion) at the intersections affected by the project. The potential for CO hotspots was evaluated based on the results of the Traffic Impact Analysis. The California Department of Transportation (Caltrans) standard method for project-level CO analysis, the Institute of Transportation Studies (ITS) Transportation Project-Level Carbon Monoxide Protocol (CO Protocol; UC Davis 1997), was followed.

In accordance with the CO Protocol, CO hotspots should be evaluated when a project is likely to worsen air quality. Relevant criteria include, but are not limited to, (1) the LOS of an intersection

or roadway decreases to LOS E or worse; (2) signalization and/or channelization is added to an intersection; and (3) sensitive receptors such as residences, schools, and hospitals are located in the vicinity of the affected intersection or roadway segment.

The project's Traffic Impact Analysis evaluated 15 intersections in the project study area to assess potential impacts resulting from the project. Under the existing conditions (2013), all study intersections would operate at LOS D or better during both peak periods based on the Highway Capacity Manual (TRB 2010) methodology, with the exception of the Brockton Avenue and the RCH Entrance intersection, which operates at LOS E in the PM peak hour.

Under Existing Plus Phase I conditions (see Appendix I for description of traffic analysis scenarios), with the addition of Phase I traffic, four intersections would operate at an unacceptable LOS and would result in a significant impact per the City's traffic significance criteria (see the Draft EIR, Section 4.10, Traffic). Mitigation measures have been incorporated into the project to reduce significant traffic impacts related to unacceptable LOS operation at intersections resulting from project-added traffic.

In order to account for other unforeseen cumulative projects and regional traffic growth, cumulative project information was obtained from the City by Kimley-Horn and Associates Inc. (Kimley-Horn). The existing plus cumulative projects traffic volumes were obtained by adding the existing traffic volumes, plus an annual growth rate of 0.5% per year until the opening year (2014), plus cumulative projects traffic. Under the Year 2014 Cumulative Conditions Plus Phase I analysis, with the addition of Phase I traffic along with other cumulative projects, four intersections would operate at an unacceptable LOS, resulting in a significant traffic impact. The incorporation of mitigation would reduce overall intersection delay and would improve PM peak hour to LOS C, thus reducing traffic impacts at these four intersections.

Year 2035 cumulative conditions peak hour traffic forecasts were developed using forecast volumes from the Riverside Traffic Analysis Model for Base Year 2007 and Buildout Year 2035. Phases IIa, IIb, and IIc traffic volumes were added to obtain the Year 2035 cumulative conditions with Phases IIa, IIb, and IIc volumes. The intersection analysis for Year 2035 cumulative conditions plus Phases IIa, IIb, and IIc peak hour intersection operations projected three intersections would operate at an unacceptable LOS.

Mitigation measures (**MM TRA-1** through **MM TRA-8**; see Section 4.10 of the EIR) would be incorporated to reduce potential project-generated impacts during Phases I, IIa, IIb, and IIc.

Implementation of mitigation measures **MM TRA-1** through **MM TRA-8** (see Section 4.10 of the EIR) is anticipated to reduce potential project-generated traffic impacts where the LOS of an intersection was forecasted to decrease to LOS E or worse as a result of the project under existing plus Phase I conditions, Year 2014 cumulative conditions plus Phase I conditions, and Year 2035 cumulative conditions plus Phases IIa, IIb, and IIc conditions. Per the Caltrans CO Protocol, a CO hotspot analysis would not be required for project study intersections and potential impacts related to high levels of CO concentrations are not anticipated.

In addition to the findings related to the project's impacts on traffic at affected intersections, the background CO levels in the area are less than 20% of the 1- and 8-hour CAAQS (see Table 4.2-3) and would be expected to improve further due to reductions in motor vehicle emissions. Based on this assessment, the project would result in a **less than significant** impact to sensitive receptors with regard to potential CO hotspots resulting from its contribution to cumulative traffic-related air quality impacts; therefore, mitigation would not be required.

7.7 Health Impacts of Criteria Air Pollutants

Construction

As indicated in Section 7.2, the NO_x emissions during construction would exceed the SCAQMD daily significance threshold; all other criteria pollutants were found to be less than significant. It should be noted that much of the NO_x emitted during construction activities is associated with haul truck trips for export of excavated soil. Thus, these emissions would be distributed over the haul truck route and would not occur in the local area where they could contribute to local impacts on ambient air quality. While the significance threshold is not intended to predict whether a corresponding increase in a specific ambient air quality impact or related health impact would occur (i.e., emissions exceeding a significance threshold do not necessarily result in changes in ambient concentrations of air pollutants), they do suggest that existing poor air quality conditions and related health effects could be exacerbated when a significance threshold is exceeded.

In addition to contributing to ambient concentrations of NO_2, NO_x is a precursor to O_3, for which the SCAB is designated as nonattainment with respect to the NAAQS and CAAQS. Thus, existing O_3 levels in the SCAB are at unhealthy levels during certain periods. The health effects associated with O_3, as discussed in Chapter 3.0, are generally associated with reduced lung function. The contribution of NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SCAB due to O_3 precursor emissions tend to be found downwind from the source location because it takes time for the

photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the NO_x emissions would occur because exceedances of the O_3 ambient air quality standards tend to occur between April and October, when solar radiation is highest. The effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, NO_x emissions associated with project construction could contribute to increased regional O_3 concentrations and associated health impacts.

According to the LST analysis, the construction of the project could cause or contribute to exceedances of the NAAQS and CAAQS for NO_2, PM_{10}, and $PM_{2.5}$ at sensitive receptors, including residences, schools, and the portions of the hospital that house patients. As described in Chapter 3.0, NO_2 health impacts are associated with respiratory irritation, which may be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. Through potential reductions in PM_{10} and $PM_{2.5}$ related to fugitive dust control and in NO_x emissions from construction equipment, application of mitigation measures (e.g., **MM AQ-3**) would help to mitigate, but not eliminate, this impact by reducing emissions of NO_x and fugitive dust. The highest impacts for these air pollutants would occur at the hospital due to the proximity to the construction areas. The hospital would take precautionary measures to protect its patients and staff. Such measures may include requesting the contractor to institute more frequent watering of disturbed areas to further reduce fugitive dust, installing construction filter media on the air intake side of the air handler units to supplement existing high-efficiency particulate arresting (HEPA) filters, and inspecting or replacing HEPA filters more frequently. Based on the results of the LST analysis, residential receptors are not anticipated to be exposed to levels of NO_2, PM_{10}, and $PM_{2.5}$ exceeding the LSTs during any construction phase; thus, no increases in health impacts at residences in the vicinity of RCH are anticipated during any construction phase. The Grant Elementary School and childcare center would be potentially exposed to elevated concentrations of NO_2, PM_{10}, and $PM_{2.5}$ during construction of Phase I and to elevated concentrations of PM_{10} during construction of Phase IIb. Thus, students and staff at these facilities could experience an increase in the health effects related to NO_2 (as discussed above) and to PM_{10} and $PM_{2.5}$. As discussed in Chapter 3.0, exposure to PM_{10} and $PM_{2.5}$ may result in health effects including an increase in the number and severity of asthma attacks, aggravated bronchitis and other lung diseases, and a reduction in the body's ability to fight infections. Providing advance notice to the school during days that would result in elevated PM_{10} and $PM_{2.5}$ emissions, such as demolition or grading, would allow students and staff to remain indoors during these activities. Thus, the related health effects would be avoided to a large extent.

Operation

The net change in operational emissions between the baseline conditions and implementation of Phase I (2017) would not result in emissions of VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ that would exceed the SCAQMD emissions-based thresholds. Similarly, the net change between the baseline conditions and RCH operation after Phase IIb implementation would not result in a net change in emissions that would exceed the SCAQMD operational thresholds. Although project-generated operational emissions would not exceed SCAQMD thresholds when compared to baseline conditions, the project would result in an increase in criteria air pollutant emissions that would contribute to regional air pollutant concentrations and potential related adverse health effects. Project-generated VOC and NO_x emissions would contribute to regional O_3 concentrations and its associated health effects, such as breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. However, given the less than significant increase in VOC and NO_x emissions and the expected reduction in future ambient O_3 levels due to SCAQMD and other control measures, these health effects as a result of the project are less likely to occur. In addition to O_3, project-generated NO_x emissions could contribute to potential exceedances of the NAAQS and CAAQS for NO_2. As shown in Table 8, Ambient Air Quality Data, the existing NO_2 concentrations are well below the NAAQS and CAAQS and are likely to continue to decrease due to SCAQMD efforts to reduce O_3. Thus, it is not expected that the project's operational NO_x emissions would result in exceedances of the NO_2 standards or contribute to the associated health effects.

CO tends to be a localized impact associated primarily with congested intersections. The associated CO hotspots were discussed previously as a less than significant impact. Thus, the project's CO emissions would not contribute to the health effects associated with this pollutant. Ambient SO_2 concentrations are at very low levels relative to the NAAQS and CAAQS, and the project would contribute small amounts of SO_x emissions, which are primarily in the form of SO_2; thus, the project would not result in adverse health impacts related to SO_2.

Project-generated emissions of PM_{10} and $PM_{2.5}$ would contribute to the SCAB's nonattainment designation for state PM_{10} and $PM_{2.5}$ standards and federal $PM_{2.5}$ standards. As described in Chapter 3.0, $PM_{2.5}$ and PM_{10} emissions can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. The net change in PM_{10} and $PM_{2.5}$ emissions relative to baseline conditions is well below the SCAQMD significance levels. Furthermore, the project-related operational PM_{10} and $PM_{2.5}$ emissions are primarily caused by motor vehicles (exhaust and fugitive paved road dust), which would be dispersed throughout the hospital's service area rather than concentrated at the

project site. Thus, the PM_{10} and $PM_{2.5}$ operational emissions are not expected to cause local increases in health effects due to these pollutants.

7.8 Odors

Odors would be generated by vehicles and/or equipment exhaust emissions during construction of the project. Odors produced during construction would be attributable to architectural coatings and to concentrations of unburned hydrocarbons from the tailpipes of construction equipment. Such odors are temporary and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be considered **less than significant**.

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The project entails expansion of a hospital and would not result in the creation of a land use that is commonly associated with odors. Therefore, project operations would result in an odor impact that is **less than significant.**

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8.0 SUMMARY AND CONCLUSIONS

This air quality impact analysis evaluates the potential for significant adverse impacts to the ambient air quality due to construction and operational emissions resulting from the project. Construction of Phase I, Phase IIa, and Phase IIb of the project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. The analysis concludes that the daily construction emissions would not exceed the City's significance thresholds for VOC, CO, SO_x, PM_{10}, or $PM_{2.5}$ during construction in any of the construction years. Construction of the project, however, would exceed daily construction emissions thresholds for NO_x, even with implementation of **MM AQ-1**, thus resulting in a **significant** air quality impact. The LST analysis for construction impacts found that local ambient air quality impacts would exceed the LSTs for NO_2, PM_{10}, and $PM_{2.5}$ at sensitive receptors at the hospital and off site. Thus, the construction of the project would result in a **significant** air quality impact. Because the effectiveness of mitigation measure **MM AQ-3**, which requires additional control of fugitive dust and construction equipment NO_x emissions, cannot be quantified, impacts to local ambient air quality would be **potentially significant and unavoidable**.

The net change in operational emissions was also found to be **less than significant.** However, there is no information on the approximate size and location of construction or possible demolition activities under Phase IIc. The project has not yet been defined for Phase IIc; therefore, construction and operational emissions for Phase IIc must be reviewed and analyzed in a subsequent analysis. To verify that air quality impacts would not exceed what is allowed under the SCAQMD thresholds, mitigation measures **MM AQ-2**, which call for the preparation of a site-specific air quality technical report, will be incorporated. Because it is not certain that implementation of **MM AQ-2** would reduce impacts to less than significant, impacts to air quality would be **potentially significant and unavoidable**.

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9.0 GLOBAL CLIMATE CHANGE

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer).

9.1 The Greenhouse Effect and Greenhouse Gases

Gases that trap heat in the atmosphere are often called GHGs. The greenhouse effect traps heat in the troposphere through a threefold process: short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit this long-wave radiation into space and back toward the Earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), O_3, and water vapor (H_2O). Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil-fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Man-made GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3), which are associated with certain industrial products and processes (CAT 2006).

The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Without it, the temperature of the Earth would be about 0°F (−18°C) instead of its current 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect.

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP). The GWP varies between GHGs; for example, the GWP of CH_4 is 21, and the GWP of N_2O is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG gas emissions are typically measured in terms of pounds or tons of CO_2 equivalent (CO_2E).[7]

[7] The CO_2 equivalent for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of CO_2E = (metric tons of a GHG) × (GWP of the GHG). For example, the GWP for CH_4 is 21. This means that emissions of 1 metric ton of CH_4 are equivalent to emissions of 21 metric tons of CO_2.

9.2 Contributions to Greenhouse Gas Emissions

In 2011, the United States produced 6,702 million metric tons (MMT) of CO_2E (EPA 2013d). The primary GHG emitted by human activities in the United States was CO_2, representing approximately 84% of total GHG emissions. The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 94% of the CO_2 emissions.

According to the 2010 GHG inventory data compiled by CARB for the California Greenhouse Gas Inventory for 2000–2010, California emitted 452 MMT CO_2E of GHGs, including emissions resulting from out-of-state electrical generation (CARB 2013d). The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. These primary contributors to California's GHG emissions and their relative contributions in 2010 are presented in Table 30, GHG Sources in California.

Table 30
GHG Sources in California

Source Category	Annual GHG Emissions (MMT CO_2E)	% of Total[a]
Agriculture	32.45	7.2%
Commercial uses	14.50	3.2%
Electricity generation	93.30[b]	20.7%
Forestry (excluding sinks)	0.19	0.0%
Industrial uses	85.96	19.0%
Recycling and waste	6.98	1.5%
Residential uses	29.38	6.5%
Transportation	173.18	38.3%
High GWP substances	15.66	3.5%
Totals[c]	451.60	100%

Source: CARB 2013d.
[a] Percentage of total has been rounded.
[b] Includes emissions associated with imported electricity, which account for 43.59 MMT CO_2E annually.
[c] Totals may not sum due to rounding.

The City of Riverside Community Greenhouse Gas Emissions Inventory (City of Riverside 2010) preliminary study evaluated the current level of GHG emissions from the community within City's geographic boundary (Community) and utilized ICLEI's Clean Air and Climate Protection Software and emission accounting protocols for assessing emissions from the following sectors: built environment (residential, commercial, industrial), mobile emissions (on-road transportation, airport, rail), and solid waste.

From 1990 to 2000, overall GHG emissions produced by the Community within the City increased by 20.4%. A critical factor in this rise is the continued growth and development within the City. For comparison, GHG emissions nationwide increased by about 15% between 1990 and 2000, according to the EPA (City of Riverside 2010). Similar growth and development occurred in the City between 2000 and 2007, and growth was projected going forward to 2012 under a business-as-usual scenario (i.e., no reduction in emissions due to GHG reduction measures). As shown in Table 31, Community GHG Emissions, the City's emissions were projected to increase in 2012 by 17.8% from 2007. Based on a population of 296,842 residents, the per capita CO_2E emissions were 9.45 MT per resident per year in 2007. The Community's estimated GHG emissions from City operations in the 2007 (baseline) and projected emissions under a 5-year business-as-usual scenario in 2012 are presented in Table 31.

Table 31
Community GHG Emissions

	2007		Projected 2012 Business as Usual	
Sector	*MT CO_2E*	*% of Total*	*MT CO_2E*	*% of Total*
Built Environment Energy Use – Electricity				
Residential	357,306	12.7%	405,185	12.3%
Commercial/industrial	669,297	23.9%	773,772	23.4%
Build Environment Energy Use – Natural Gas				
Residential	204,976	7.3%	200,261	6.1%
Commercial/industrial	187,152	6.7%	237,028	7.2%
Mobile Emissions				
On-road transportation	1,139,674	40.6%	1,379,744	40.8%
Airport	1,540	0.1%	2,728	0.1%
Rail	27,524	1.0%	51,245	1.6%
Solid waste	218,432	7.8%	254,610	7.7%
Total	2,805,901	100.0%	3,304,673	100%

Source: City of Riverside 2010.

9.3 Potential Effects of Human Activity on Climate Change

According to CARB, some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high O_3 days, more large forest fires, and more drought years (CARB 2006). Several recent studies have attempted to explore the possible negative consequences that climate change, left unchecked, could have in California. These reports acknowledge that climate scientists' understanding of the complex global climate system, and the interplay of the various internal and external factors that affect climate change, remains too limited to yield scientifically valid conclusions on such a localized

scale. Substantial work has been done at the international and national level to evaluate climatic impacts, but far less information is available on regional and local impacts.

The primary effect of global climate change has been a rise in average global tropospheric temperature of 0.2°C per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using emission rates from the year 2000 shows that further warming would occur, which would induce further changes in the global climate system during the current century. Changes to the global climate system and ecosystems and to California would include, but would not be limited to, the following:

- The loss of sea ice and mountain snowpack, resulting in higher sea levels and higher sea surface evaporation rates, with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures (IPCC 2007)
- A rise in global average sea level, primarily due to thermal expansion and melting of glaciers and ice caps and the Greenland and Antarctic ice sheets (IPCC 2007)
- Changes in weather that include widespread changes in precipitation, ocean salinity, and wind patterns; and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones (IPCC 2007)
- A decline of Sierra snowpack, which accounts for approximately half of the surface water storage in California, by 70% to as much as 90% over the next 100 years (CAT 2006)
- An increase in the number of days conducive to O3 formation by 25% to 85% (depending on the future temperature scenario) in high O3 areas of Los Angeles and the San Joaquin Valley by the end of the 21st century (CAT 2006)
- A high potential for erosion of California's coastlines and seawater intrusion into the Delta and levee systems due to the rise in sea level (CAT 2006).

9.4 Regulatory Setting

Regulation of GHGs in the United States and California is relatively recent, beginning early in the 2000s. In the absence of major federal efforts, California's former governor, Arnold Schwarzenegger, and the legislature took initiatives to establish goals for reductions of GHG emissions in California and to prescribe a regulatory approach to ensuring that the goals would be met. The federal government, primarily through actions of the EPA, has also begun to regulate GHG emissions, although not as comprehensively. This section provides a brief

foundation for these regulatory efforts and discusses the key federal and state regulatory efforts that could apply to development under the project and the users of such development.

Federal Activities

Massachusetts v. EPA. On April 2, 2007, in *Massachusetts v. EPA*, the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act. On December 19, 2007, President George W. Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the act would do the following, which would aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022
2. Set a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2020 and direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks
3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy

efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

EPA and NHTSA Joint Final Rule for Vehicle Standards. On April 1, 2010, the EPA and NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. The EPA is finalizing the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (EPA and NHTSA 2010). This final rule follows the EPA and Department of Transportation's joint proposal on September 15, 2009, and is the result of President Obama's May 2009 announcement of a national program to reduce GHGs and improve fuel economy (EPA 2011). The final rule became effective on July 6, 2010 (EPA and NHTSA 2010).

The EPA GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, equivalent to 35.5 miles per gallon (mpg) if the automotive industry were to meet this CO_2 level through fuel economy improvements alone. The CAFE standards for passenger cars and light trucks will be phased in between 2012 and 2016, with the final standards equivalent to 37.8 mpg for passenger cars and 28.8 mpg for light trucks, resulting in an estimated combined average of 34.1 mpg. Together, these standards will cut GHG emissions by an estimated 960 MMT and save 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program. The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers (EPA 2011).

In August 2012, the EPA and NHTSA approved a second round of GHG and CAFE standards for model years 2017 and beyond (EPA and NHTSA 2012). These standards will reduce motor vehicle GHG emissions to 163 grams of CO_2 per mile, which is equivalent to 54.5 mpg if this level were achieved solely through improvements in fuel efficiency, for cars and light-duty trucks by model year 2025. A portion of these improvements, however, will likely be made through reductions in air conditioning leakage and through use of alternative refrigerants, which would not contribute to fuel economy. The first phase of the CAFE standards (for model year 2017 to 2021) is projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 mpg in model year 2021. The second phase of the CAFE program (for model years 2022 to 2025) is projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 mpg in model year 2025. The second phase of standards has not been finalized due to the statutory requirement that the NHTSA set average fuel economy standards

not more than 5 model years at a time. The regulations also include targeted incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including the following:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel-cell vehicles
- Incentives for hybrid technologies for large pickup trucks and for other technologies that achieve high fuel economy levels in large pickup trucks
- Incentives for natural gas vehicles
- Credits for technologies with potential to achieve real-world GHG reductions and fuel economy improvements that are not captured by the standard test procedures.

State of California

Title 24. Although not originally intended to reduce GHG emissions, California's Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CCR 6) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy-efficiency technologies and methods. The premise for the standards is that energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space and water heating) result in GHG emissions. Therefore, increased energy efficiency in buildings results in relatively lower rates of GHG emissions on a building-by-building basis. However, 24 CCR 6 does not apply to hospitals.

Assembly Bill 1493. In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (Pavley) was enacted on July 22, 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

Before these regulations could go into effect, the EPA had to grant California a waiver under the federal Clean Air Act, which ordinarily preempts state regulation of motor vehicle emission standards. The waiver was granted by Lisa Jackson, the EPA administrator, on June 30, 2009. On

March 29, 2010, the CARB executive officer approved revisions to the motor vehicle GHG standards to harmonize the state program with the national program for 2012–2016 model years (see EPA and NHTSA Joint Final Rule for Vehicle Standards). The revised regulations became effective April 1, 2010.

Executive Order S-3-05. In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The executive order established the following goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80% below 1990 levels by 2050. The CalEPA secretary is required to coordinate efforts of various agencies to collectively and efficiently reduce GHGs. The Climate Action Team (CAT) is responsible for implementing global warming emissions reduction programs. Representatives from several state agencies compose the CAT. Under the executive order, the CalEPA secretary is directed to report biannually on progress made toward meeting the GHG emission targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The CAT fulfilled its initial report requirements through the 2006 *Climate Action Team Report to Governor Schwarzenegger and the Legislature* (CAT 2006).

The 2009 *Climate Action Team Biennial Report* (CAT 2010a), published in April 2010, expands on the policy outlined in the 2006 assessment. The 2009 report provides new information and scientific findings regarding the development of new climate and sea level projections using new information and tools that have recently become available and evaluates climate change within the context of broader social changes, such as land use changes and demographics. The 2009 report also identifies the need for additional research in several different aspects that affect climate change in order to support effective climate change strategies. The aspects of climate change determined to require future research include vehicle and fuel technologies, land use and smart growth, electricity and natural gas, energy efficiency, renewable energy and reduced carbon energy sources, low GHG technologies for other sectors, carbon sequestration, terrestrial sequestration, geologic sequestration, economic impacts and considerations, social science, and environmental justice.

Subsequently, the 2010 *Climate Action Team Report to Governor Schwarzenegger and the California Legislature* (CAT 2010b) reviews past Climate Action Milestones, including voluntary reporting programs, GHG standards for passenger vehicles, the Low Carbon Fuel Standard (LCFS), a statewide renewable energy standard, and the cap-and-trade program. Additionally, the 2010 report includes a cataloguing of recent research and ongoing projects; mitigation and adaptation strategies identified by sector (e.g., agriculture, biodiversity, electricity and natural gas); actions that can be taken at the regional, national, and international levels to

mitigate the adverse effects of climate change; and today's outlook on future conditions. The 2010 report also focuses on case studies involving collaborative efforts among multiple agencies on research projects related to climate change and policy development.

Assembly Bill 32. In furtherance of the goals established in Executive Order S-3-05, the legislature enacted AB 32 (Núñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. The GHG emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020.

CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions. This program will be used to monitor and enforce compliance with the established standards. CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

The first action under AB 32 resulted in the adoption of a report listing early-action GHG emission reduction measures on June 21, 2007. The early actions include three specific GHG control rules. On October 25, 2007, CARB approved an additional six early-action GHG reduction measures under AB 32. The three original early-action regulations meeting the narrow legal definition of "discrete early action GHG reduction measures" consist of the following:

1. A low-carbon fuel standard to reduce the "carbon intensity" of California fuels
2. Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of "do-it-yourself" automotive refrigerants
3. Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The additional six early-action regulations, which were also considered "discrete early action GHG reduction measures," consist of the following:

1. Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology
2. Reduction of auxiliary engine emissions of docked ships by requiring port electrification

3. Reduction of PFC emissions from the semiconductor industry
4. Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products)
5. Requirements that all tune-up, smog check, and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency
6. Restriction on the use of SF_6 from non-electricity sectors if viable alternatives are available.

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 MMT CO_2E. In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for the large facilities that account for 94% of GHG emissions from industrial and commercial stationary sources in California. About 800 separate sources fall under the new reporting rules and include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and other industrial sources that emit CO_2 in excess of specified thresholds.

On December 11, 2008, CARB approved the *Climate Change Proposed Scoping Plan: A Framework for Change* (Scoping Plan; CARB 2008) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and CAT early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program.

The key elements of the Scoping Plan include the following:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
- Achieving a statewide renewables energy mix of 33%
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the LCFS

- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

Senate Bill 1368. In September 2006, Governor Schwarzenegger signed SB 1368, which requires the California Energy Commission (CEC) to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC). This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants, by requiring imported electricity to meet GHG performance standards in California, and by requiring that the standards be developed and adopted in a public process.

Executive Order S-1-07. Issued on January 18, 2007, Executive Order S-1-07 sets a declining LCFS for GHG emissions measured in CO_2E grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources such as algae, wood, and agricultural waste. In addition, the LCFS would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The LCFS is anticipated to lead to the replacement of 20% of the fuel used in motor vehicles with alternative fuels by 2020.

Senate Bill 375. In August 2008, the legislature passed, and on September 30, 2008, Governor Schwarzenegger signed, SB 375 (Steinberg), which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see Senate Bill 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations will be responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning

organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or alternative planning strategy. On September 23, 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for SCAG are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035. SCAG prepared its RTP/SCS, which was adopted by the SCAG Regional Council on April 4, 2012. The plan quantified a 9% reduction by 2020 and a 16% reduction by 2035. On June 4, 2012, the CARB executive officer issued an executive order accepting SCAG's quantification of GHG reductions and the determination that the SCS would achieve the GHG emission reduction targets established by CARB.

Executive Order S-13-08. Governor Schwarzenegger issued Executive Order S-13-08 on November 14, 2008. The executive order is intended to hasten California's response to the impacts of global climate change, particularly sea level rise. It directs state agencies to take specified actions to assess and plan for such impacts. It directs the CNRA, in cooperation with the California Department of Water Resources, CEC, California's coastal management agencies, and the Ocean Protection Council, to request that the National Academy of Sciences prepare a Sea Level Rise Assessment Report by December 1, 2010. The Ocean Protection Council, California Department of Water Resources, and CEC, in cooperation with other state agencies, are required to conduct a public workshop to gather information relevant to the Sea Level Rise Assessment Report. The Business, Transportation, and Housing Agency was ordered to assess within 90 days of the order the vulnerability of the state's transportation systems to sea level rise. The Governor's Office of Planning and Research (OPR) and the CNRA are required to provide land use planning guidance related to sea level rise and other climate change impacts. The order also requires the other state agencies to develop adaptation strategies by June 9, 2009, to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. A discussion draft adaptation strategies report was released in August 2009, and the final adaption strategies report was issued in December 2009. To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: public health, ocean and coastal resources, water supply and flood protection, agriculture, forestry, biodiversity and habitat, and transportation and energy infrastructure. The report then recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Senate Bill X1 2. On April 12, 2011, Governor Jerry Brown signed SB X1 2 in the First Extraordinary Session, which would expand the Renewable Portfolio Standard (RPS) by establishing a goal of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current and that meets other specified requirements with respect to its location. In addition to the retail sellers covered by SB 107, SB X1 2 adds local publicly owned electric utilities to the RPS. By January 1, 2012, the CPUC is required to establish the quantity of electricity products from eligible renewable energy resources to be procured by retail sellers in order to achieve targets of 20% by December 31, 2013; 25% by December 31, 2016; and 33% by December 31, 2020. The statute also requires that the governing boards for local publicly owned electric utilities establish the same targets and that the governing boards be responsible for ensuring compliance with these targets. The CPUC will be responsible for enforcement of the RPS for retail sellers, while the CEC and CARB will enforce the requirements for local publicly owned electric utilities.

City of Riverside

In July 2005, the City assembled a Clean and Green Task Force that developed guidelines for a cleaner, greener, and more sustainable city. Their sustainability policy statement highlighted the following categories: save water, keep it clean, make it solar, make it shady, clean the air, save fuel, make it smart, and build green. The task force created a 38-point Clean and Green Sustainable Riverside Action Plan (Green Action Plan) to transform the policy statement into an implementation plan. The Green Action Plan is an evolving document that outlines ways to improve air quality, reduce traffic congestion, increase accessibility and use of parks, and otherwise preserve the environment (City of Riverside 2012). The first Riverside Green Action Plan was approved by the City Council in December 2007. To ensure that the tasks of the Green Action Plan would be carried out successfully, the City formed a Green Accountability Performance Committee, and within just 2 years nearly all of the plan's 38 tasks had been accomplished. In February 2009, the California Department of Conservation introduced Riverside as California's First Emerald City and in September 2009, the City introduced a Green Action Plan – Emerald City update. The latest Green Action Plan (City of Riverside 2012) includes 19 goals and more than 50 tasks within the following eight areas: energy, GHG emissions, waste, urban design, urban nature, transportation, water, and healthy communities.

There are two goals under the Green Action Plan GHG emissions focus area: Goal 4 and Goal 5. One action under Goal 4 is to establish the 1990 GHG emissions baseline for the City by the end of

2010 and every 5 years thereafter. Goal 5 aims to create a climate action plan to reduce GHG emissions to 7% below the 1990 City baseline, utilizing the City boundaries as defined in 2008. In 2010, the City established the 1990 emissions baseline (City of Riverside 2010). The remaining actions under Goal 4 (to develop and incorporate mitigation measures in the Green Action Plan that provide verifiable GHG savings by 2010 and work with the Western Riverside Council of Government's Climate Action Plan team to update the inventories in compliance with the audit, leveraging off the Western Riverside Council of Governmental Regional Climate Action Plan Grant) have not been completed. Goal 5 has not been completed and the tasks under Goal 5 that involve identifying mitigation measures to meet the GHG reduction goal have also not been accomplished at this time.

9.5 Thresholds of Significance for GHG Emissions

OPR Guidance

The OPR's Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

Cumulative Nature of Climate Change

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project in the SCAB, such as the project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change.

While the project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally believed that an individual project is of insufficient magnitude by itself to influence climate change or result in

a substantial contribution to the global GHG inventory as scientific uncertainty regarding the significance a project's individual and cumulative effects on global climate change remains.

Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the CNRA, which noted in its Public Notice for the proposed CEQA amendments that the evidence before it indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009a). Similarly, the *Final Statement of Reasons for Regulatory Action on the CEQA Amendments* confirms that an EIR or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009b). Accordingly, further discussion of the project's GHG emissions and their impact on global climate are addressed below.

CEQA Guidelines

The CNRA adopted amendments to the CEQA Guidelines on December 30, 2009, which became effective on March 18, 2010 (14 CCR 15000 et seq.). With respect to GHG emissions, the amended CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15000 et seq.). Section 15064.4(b) provides that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the

decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). Similarly, the revisions to Appendix G, Environmental Checklist Form, which is often used as a basis for lead agencies' selection of significance thresholds, do not prescribe specific thresholds. Rather, the CEQA Guidelines establish two new CEQA thresholds related to GHGs and these will therefore be used to discuss significance of project impacts:

- Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Accordingly, the CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (14 CCR 15000 et seq.).

Status of Proposed SCAQMD Thresholds

The SCAQMD has not adopted recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects. In October 2008, SCAQMD presented to the Governing Board the *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (SCAQMD 2008c). The guidance document was not adopted or approved by the Governing Board. This document, which builds on the previous guidance prepared by CAPCOA (discussed previously), explored various approaches for establishing a significance threshold for GHG emissions. Among the concepts discussed, the document considered a "de minimis," or screening, threshold to "identify small projects that would not likely contribute to significant cumulative GHG impacts" (SCAQMD 2008c). As further explained in this document, "Projects with GHG emissions less than the screening level are considered to be small projects, that is, they would not likely be considered cumulatively considerable" (SCAQMD 2008c). The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. The SCAQMD proposed three tiers of compliance that may lead to a determination that impacts are less than significant, including the following:

1. Projects with GHGs within budgets set out in approved regional plans to be developed under the SB 375 process

2. Projects with GHG emissions that are below designated quantitative thresholds:
   a. Industrial projects with an incremental GHG emissions increase that falls below (or is mitigated to be less than) 10,000 MT CO_2E per year
   b. Commercial and residential projects with an incremental GHG emissions increase that falls below (or is mitigated to be less than) 3,000 MT CO_2E per year, provided that such projects also meet energy efficiency and water conservation performance targets that have yet to be developed
3. Projects that purchase GHG offsets that, either alone or in combination with one of the three tiers mentioned above, achieve the target significance screening level.

From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The most recent working group meeting on September 28, 2010 (SCAQMD 2010), proposed two options lead agencies can select from to screen thresholds of significance for GHG emissions in residential and commercial projects, and proposes to expand the industrial threshold to other lead agency industrial projects. Option 1 proposes a threshold of 3,000 MT CO_2E per year for all residential and commercial projects and Option 2 proposes a threshold value by land use type where the numeric threshold is 3,500 MT CO_2E per year for residential projects, 1,400 MT CO_2E per year for commercial projects, and 3,000 MT CO_2E per year for mixed-use projects (SCAQMD 2010). The SCAQMD has not considered thresholds for institutional projects such as this project. Further, the SCAQMD has not formally adopted these thresholds mentioned above. Therefore, the City has concluded that there are no numeric emission-based thresholds by which the City could evaluate whether the project emissions would exceed a threshold of significance as indicated in Section 15064.4(b)(2) of the CEQA Guidelines.

9.6 Construction Emissions

Construction of the project would result in GHG emissions that are primarily associated with use of off-road construction equipment and on-road construction and worker vehicles. CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 7.1.

Phase I

On-site sources of GHG emissions include off-road equipment; off-site sources include hauling and vendor (delivery) trucks and worker vehicles. Table 32, Phase I Estimated Construction

GHG Emissions, presents construction emissions for the project from Year 2014 to Year 2017 from emission sources.

Table 32
Phase I Estimated Annual Construction GHG Emissions

Phase I	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Year 2014	284.64	0.05	0.00	285.68
Year 2015	440.63	0.08	0.00	442.29
Year 2016	476.84	0.08	0.00	478.60
Year 2017	31.86	0.00	0.00	32.06
Total	1,233.97	0.21	0.00	1,238.63

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent
Phase I Estimated Annual Construction GHG Emissions does not include the new parking structure (Building O) or medical office building (Building P).

As shown in Table 32, the estimated total GHG emissions during Phase I construction would be approximately 1,239 MT CO_2E. Additional details regarding these calculations are found in Appendix A.

Completion of Parking Structure (Building O) and Medical Office Building (Building P) Prior to Phase I Construction

Buildings O and P were under construction at the time this report was prepared. Emissions associated with the remaining construction phases[8] of the parking structure (Building O) and medical office building (Building P) are presented in Tables 33 and 34, respectively.

Table 33
Parking Structure (Building O) Estimated Annual Construction GHG Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Year 2013	58.36	0.01	0.00	58.64
Year 2014	29.82	0.01	0.00	29.96
Total	88.18	0.02	0.00	88.60

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent

[8] At the time of report preparation, the approved parking structure (Building O) and medical office building (Building P) were under construction. The majority of the activity required to construct these buildings has been accomplished, and both buildings would be completed prior to commencement of Phase I construction. However, an alternative baseline scenario has been included in the discussion to include the remaining phases of construction of the parking structure (Building O) and medical office building (Building P).

Table 34
Medical Office Building (Building P) Estimated Annual Construction GHG Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Year 2013	18.69	0.00	0.00	18.78
Year 2014	12.54	0.00	0.00	12.60
Total	31.23	0.00	0.00	31.38

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent

As shown in Tables 33 and 34, the estimated total GHG emissions during parking structure (Building O) construction would be approximately 89 MT CO_2E and GHG emissions generated during medical office building (Building P) construction would be approximately 31 CO_2E per year. Additional details regarding these calculations are found in Appendix A.

Phase IIa

Table 35, Phase IIa Estimated Construction GHG Emissions, presents construction emissions for the project from Year 2017 to Year 2018 from emission sources.

Table 35
Phase IIa Estimated Annual Construction GHG Emissions

Phase IIa	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Year 2017	307.58	0.06	0.00	308.73
Year 2018	191.48	0.04	0.00	192.23
Total	499.06	0.09	0.00	500.96

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent
Phase IIa Estimated Annual Construction GHG Emissions does not include the new parking structure (Building O) or medical office building (Building P).

As shown in Table 35, the estimated total GHG emissions during Phase IIa construction would be approximately 501 MT CO_2E. Additional details regarding these calculations are found in Appendix A.

Phase IIb

Table 36, Phase IIb Estimated Construction GHG Emissions, presents construction emissions for the project from Year 2024 to Year 2027 from emission sources.

Table 36
Phase IIb Estimated Annual Construction GHG Emissions

Phase IIa	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Year 2024	195.96	0.06	0.00	197.16
Year 2025	616.66	0.07	0.00	618.19
Year 2026	538.92	0.07	0.00	540.39
Year 2027	448.62	0.07	0.00	449.99
Total	1,800.16	0.27	0.00	1,805.73

Notes: See Appendix A for detailed results.
MT CO_2 = metric tons carbon dioxide; MT CH_4 = metric tons methane; MT N_2O = metric tons nitrous oxide; MT CO_2E = metric tons carbon dioxide equivalent
Phase IIb Estimated Annual Construction GHG Emissions does not include the new parking structure (Building O) or medical office building (Building P).

As shown in Table 36, the estimated total GHG emissions during Phase IIb construction would be approximately 1,806 MT CO_2E. Additional details regarding these calculations are found in Appendix A.

Phase IIc

As discussed in Section 7.2, Phase IIc would occur sometime between 2030 and 2043. Long-range development as part of Phase IIc of the project could include future acute care expansions, parking structures, or other ancillary uses. Please see Section 1.4, Project Description, Phase IIc – 2030 to 2043, for a list of potential Phase IIc uses. As indicated in **MM AQ-2**, during the environmental review process for future discretionary permits for Phase IIc of the project, an air quality technical report shall be prepared to analyze construction emissions. This analysis would include GHG emissions.

9.7 Operational Emissions

In accordance with Section 15064.4(b)(1) of the CEQA Guidelines, the following section evaluates whether the project would increase or reduce GHG emissions as compared to the existing environmental setting (baseline).

Baseline Operational GHG Emissions Summary

Existing (baseline) operation of the hospital results in GHG emissions from the following sources: 1) energy use (natural gas usage, boilers, and emergency generators, and generation of electricity consumed by the hospital); 2) vehicular traffic to and from the RCH site generated by patients, visitors, physicians and staff, and emergency vehicles; 3) solid waste

generation; and 4) generation of electricity associated with water supply and treatment and with wastewater treatment. Annual GHG emissions from these sources were estimated using CalEEMod. In general, the operational parameters discussed in Section 7.4 were used to estimate the GHG emissions associated with baseline conditions. The historical annual average electricity usage for 2009 to 2012 was used to develop a custom electricity usage rate in units of kilowatt-hour per square foot of hospital buildings as an input to CalEEMod. The CalEEMod default electricity usage was applied to the medical office buildings. Annual electricity emissions were estimated using the emission factors for Riverside Public Utilities, which would provide electricity for the project. Additionally, the existing operation of the hospital reflects transit accessibility as it is located approximately 0.7 mile from the Metrolink and a pedestrian network that provides better pedestrian accessibility from the project site off site. RCH will continue to implement two ride-sharing rewards programs in coordination with Inland Empire. Both programs are promoted through informational flyers and at new hire orientation. A transportation demand management coordinator is available on the campus to facilitate the distribution of information and make sure it remains current. The current transportation demand management program for the hospital includes the following two measures, which would be continued under the project:

- 2 Dollars/Day Program: Participants log their modes of commuting for 3 months and are awarded points for using alternative modes of transportation, such as the Metrolink, bus, bike routes, and carpooling. The program enables employees to connect for carpool. At the end of the 3-month period, participants are awarded gift cards based on the points accrued.
- Ride-Share Plus Program: Participants are provided with tools for carpooling, bicycling, and other alternative modes of transportation. Participants in this program have usually completed the 2 Dollars/Day Program and continue to log hours to accumulate rewards, such as a coupon book (at $1,000 value).

The baseline operational GHG emissions from electricity usage, motor vehicles, solid waste generation, water consumption, and wastewater treatment associated with the project are shown in Table 37, Baseline Estimated Operational GHG Emissions. Additional details regarding these calculations are found in Appendix A.

Table 37
Baseline Estimated Operational GHG Emissions

	MT CO_2/year	MT CH_4/year	MT N_2O/year	MT CO_2E/year
Energy (natural gas and electricity)	12,596	0.27	0.10	12,634
Mobile sources	13,601	0.55	0.00	13,613
Solid waste	939	55.51	0.00	2,105
Water supply and wastewater	706	0.11	0.06	726
Baseline total	27,842	56.44	0.16	29,078

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E =carbon dioxide equivalent

Alternative Baseline Conditions Scenario without Medical Office Building (Building P)

An alternative baseline operational scenario was developed to present baseline emissions that do not include the 61,000-square-foot medical office building (Building P), which was under construction at the time this report was prepared. Table 38, Alternative Baseline Estimated Operational GHG Emissions, shows emissions associated operation of 373 hospital beds (328,921 square feet), 82,240 square feet of hospital use, and 184,392 square feet of medical office building.

Table 38
Alternative Baseline Estimated Operational GHG Emissions

	MT CO_2/year	MT CH_4/year	MT N_2O/year	MT CO_2E/year
Energy (natural gas and electricity)	12,192	0.26	0.10	12,229
Mobile sources	12,580	0.50	0.00	12,591
Solid waste	806	47.62	0.00	1,805
Water supply and wastewater	633	0.09	0.05	652
Alternative baseline total	26,211	48.47	0.15	27,277

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent

As shown in Table 38, annual emissions generated under the alternative baseline are estimated to be approximately 27,277 MT CO_2E per year.

Project Operational GHG Emissions Summary

Phase I

The combination of Phases I, IIa, IIb, and IIc would increase the size of the hospital and number of hospital licensed beds to 600[9] as described in Section 1.4. As a result of the new construction, motor vehicle trips, stationary sources, energy usage, water usage, and wastewater and solid waste generation would increase along with their associated GHG emissions. As noted previously, specific plans have not been developed for Phase IIc land uses. Using CalEEMod and other calculations, Phase I operational GHG emissions from electricity usage, motor vehicles, emergency generators, solid waste generation, water consumption, and wastewater treatment associated with the project were estimated as shown in Table 39, Phase I Estimated Operational GHG Emissions. Additional details regarding these calculations are found in Appendix A.

Table 39
Phase I Estimated Operational GHG Emissions

	MT CO_2/year	MT CH_4/year	MT N_2O/year	MT CO_2E/year
Energy (natural gas and electricity)	18,902	0.40	0.16	18,960
Mobile sources	15,230	0.51	0.00	15,240
Emergency generators	111	—	—	114
Solid waste	917	54.21	0.00	2,056
Water supply and wastewater	793	0.12	0.07	817
Phase I total	35,953	55.24	0.23	37,187
Baseline total[a]	27,842	56.44	0.16	29,078
Net change in emissions	8,111	(1.20)	0.07	8,109

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent

[a] Baseline emissions include medical office building (Building P), which is currently under construction. Parking structures were not included in operational emissions calculations because parking structures generally do not generate vehicle trips or other substantial sources of GHGs. The motor vehicles utilizing the parking structures and their associated emissions have already been captured from the development on site.

As shown in Table 39, estimated net change of Phase I of the annual project-generated GHG emissions by 2017 and baseline conditions would be approximately 8,109 MT CO_2E per year as a result of project operations.

[9] The addition of 38 licensed beds in Phase IIc, to take the campus-wide total to 600 licensed beds, could occur in Phase IIb, if need is demonstrated prior to 2030.

Alternative Phase I

Alternative Phase I conditions assume that the medical office building (Building P) would be completed during Phase I, and the associated emissions were evaluated with those for the other buildings that would be in operation in 2017 instead of being included in the baseline. Table 40, Alternative Phase I Estimated Operational GHG Emissions, presents operational GHG emissions from electricity usage, motor vehicles, emergency generators, solid waste generation, water consumption, and wastewater treatment associated with operation of a total of 580,421 square feet of hospital facilities with up to 562 hospital licensed beds, 82,240 square feet of hospital facilities without beds, and 245,257 square feet of medical office buildings. Alternative baseline conditions emissions (Table 38) were used to estimate the net change in emissions. Additional details regarding these calculations are found in Appendix A.

Table 40
Alternative Phase I Estimated Operational GHG Emissions

	MT CO_2/year	MT CH_4/year	MT N_2O/year	MT CO_2E/year
Energy (natural gas and electricity)	19,306	0.41	0.16	19,364
Mobile sources	21,838	0.71	0.00	21,853
Emergency generators	111	—	—	114
Solid waste	1,051	62.12	0.00	2,356
Water supply and wastewater	866	0.13	0.07	892
Alternative Phase I total	43,172	63.37	0.23	44,579
Alternative baseline total	26,211	48.47	0.15	27,277
Net change in emissions	16,781	14.90	0.08	17,302

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent

As shown in Table 40, the estimated net change in the annual project-generated GHG emissions between alternative Phase I and the alternative baseline emissions would be approximately 17,302 MT CO_2E per year as a result of project operations.

Phase IIb

Phase IIb operational GHG emissions (includes Phase I and Phase IIa buildings) from electricity usage, motor vehicles, solid waste generation, water consumption, and wastewater treatment associated with the project are shown in Table 41, Phase I, Phase IIa, and Phase IIb Estimated Operational GHG Emissions. Operation on the RCH campus after the Phase IIb development (Year 2030) would total 962,950 square feet of hospital facilities with up to 600 hospital licensed

beds, 241,006 square feet of hospital facilities without beds, and 345,392 square feet of medical office buildings. Additional details regarding these calculations are found in Appendix A.

Table 41
Phase I, Phase IIa, and Phase IIb Estimated Operational GHG Emissions

	MT CO_2/year	MT CH_4/year	MT N_2O/year	MT CO_2E/year
Energy (natural gas and electricity)	34,413	0.73	0.29	34,517
Mobile sources	18,452	0.44	0.00	18,461
Emergency generators	223	—	—	228
Solid waste	1,641	97.00	0.00	3,678
Water supply and wastewater	1,205	0.18	0.10	1,241
Phase IIb total	55,934	98.35	0.39	58,125
Baseline total[a]	27,842	56.44	0.16	29,078
Net change in emissions	28,092	41.91	0.23	29,047

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent
[a] Baseline emissions include medical office building (Building P), which is currently under construction. Parking structures were not included in operational emissions calculations because parking structures generally do not generate vehicle trips or other substantial sources of GHGs. The motor vehicles utilizing the parking structures and their associated emissions have already been captured from the development on site.

As shown in Table 41, the estimated net change in Phase IIb (includes Phase I and Phase IIa buildings) of the annual project-generated GHG emissions by 2030 and baseline conditions would be approximately 29,047 MT CO_2E per year as a result of project operations.

Alternative Phase IIb

The following alternative conditions scenario assumes operation of the same land uses and square footage as Phase IIb operational conditions, but uses the alternative baseline emissions (Table 38), which do not include medical office building (Building P) to determine the net change. Table 42, Phase IIb Estimated Operational GHG Emissions Compared to Alternative Baseline Emissions, presents operational GHG emissions from electricity usage, motor vehicles, emergency generators, solid waste generation, water consumption, and wastewater treatment associated with operation of 1,203,956 square feet of hospital facilities and 345,392 square feet of medical office buildings and presents the net change from the alternative baseline emissions, which assume operation of 411,161 square feet of hospital facilities and 184,392 square feet of medical office buildings. Additional details regarding these calculations are found in Appendix A.

Table 42
Phase I, Phase IIa, and Phase IIb Estimated Operational GHG Emissions Compared to Alternative Baseline Emissions

	MT CO_2/year	MT CH_4/year	MT N_2O/year	MT CO_2E/year
Energy (natural gas and electricity)	34,413	0.73	0.29	34,517
Mobile sources	18,452	0.44	0.00	18,461
Emergency generators	223	—	—	228
Solid waste	1,641	97.00	0.00	3,678
Water supply and wastewater	1,205	0.18	0.10	1,241
Phase IIb total	55,934	98.35	0.39	58,125
Alternative baseline total	26,211	48.47	0.15	27,277
Net change in emissions	29,723	49.88	0.24	30,848

Notes: See Appendix A for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2E = carbon dioxide equivalent

As shown in Table 42, the estimated net change of operational GHG emissions between Phase IIb operation in 2030 and alternative baseline emissions would be approximately 30,848 MT CO_2E per year.

As stated above, there is no numeric emission-based threshold by which the City could evaluate whether the project emissions would exceed a threshold of significance as indicated in Section 15064.4(b)(2) of the CEQA Guidelines. Additionally, the vehicle trips associated with the project are one of the main sources of the GHG emissions. Since the trips to the existing hospital are already occurring, the "new" trips that would be created as a result of the expansion of RCH would occur somewhere in the region anyway, the project has incorporated features designed to reduce GHGs (see Table 5), and the City has policies in place that address the City's goals to reduce GHGs. The City has adopted policies and programs in its GP 2025 to promote the use of clean and renewable energy sources, facilitate alternative modes of transportation and reduce vehicle miles traveled, reduce waste, conserve water, and promote the efficient and sustainable use of energy. The project's consistency with GP 2025 objectives and policies is evaluated in Section 4.8, Land Use and Planning, of the EIR. In addition, transit accessibility, improved connection between the project site and off-site areas, and ridesharing incentives discussed previously would help reduce potential GHG emissions from operation of the project. Incorporation of the project design features listed in Table 5 would reduce GHG impacts. Impacts related to GHG emissions are considered **less than significant**.

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APPENDIX A

CalEEMod Modeling and Estimated Emissions

RCH Baseline Operations

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	373.00	Bed	6.13	328,921.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	245.39	1000sqft	5.63	245,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365

tblLandUse	LandUseSquareFeet	266,977.58	328,921.00
tblLandUse	LandUseSquareFeet	245,390.00	245,392.00
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	17.1760	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Energy	1.8259	16.5987	13.9429	0.0996		1.2615	1.2615		1.2615	1.2615		19,918.4039	19,918.4039	0.3818	0.3652	20,039.6240
Mobile	64.8760	221.4700	689.2641	1.4060	102.5363	3.4354	105.9717	27.3614	3.1558	30.5171		130,388.7804	130,388.7804	5.1686		130,497.3201
Total	**83.8779**	**238.0694**	**703.2818**	**1.5056**	**102.5363**	**4.6971**	**107.2334**	**27.3614**	**4.4176**	**31.7789**		**150,307.3376**	**150,307.3376**	**5.5508**	**0.3652**	**150,537.1071**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	17.1760	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Energy	1.8259	16.5987	13.9429	0.0996		1.2615	1.2615		1.2615	1.2615		19,918.4039	19,918.4039	0.3818	0.3652	20,039.6240
Mobile	59.3604	169.4657	557.3772	1.0426	75.2597	2.5656	77.8254	20.0827	2.3565	22.4392		96,631.6623	96,631.6623	3.9332		96,714.2591
Total	**78.3622**	**186.0651**	**571.3949**	**1.1422**	**75.2597**	**3.8274**	**79.0871**	**20.0827**	**3.6183**	**23.7010**		**116,550.2195**	**116,550.2195**	**4.3154**	**0.3652**	**116,754.0460**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**6.58**	**21.84**	**18.75**	**24.14**	**26.60**	**18.52**	**26.25**	**26.60**	**18.09**	**25.42**	**0.00**	**22.46**	**22.46**	**22.26**	**0.00**	**22.44**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	59.3604	169.4657	557.3772	1.0426	75.2597	2.5656	77.8254	20.0827	2.3565	22.4392		96,631.6623	96,631.6623	3.9332		96,714.2591
Unmitigated	64.8760	221.4700	689.2641	1.4060	102.5363	3.4354	105.9717	27.3614	3.1558	30.5171		130,388.7804	130,388.7804	5.1686		130,497.3201

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	3,379.38	2,327.52	2058.96	11,787,471	8,631,162
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	3,450.25	2,129.83	1865.00	11,766,813	8,616,036
Medical Office Building	6,205.91	1,538.60	265.02	12,166,376	8,972,615
Total	14,541.36	6,978.71	5,054.15	40,913,968	30,022,519

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466361	0.070248	0.175019	0.170752	0.044803	0.007511	0.012464	0.040207	0.001012	0.001075	0.006379	0.000925	0.003245

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.8259	16.5987	13.9429	0.0996		1.2615	1.2615		1.2615	1.2615		19,918.4039	19,918.4039	0.3818	0.3652	20,039.6240
NaturalGas Unmitigated	1.8259	16.5987	13.9429	0.0996		1.2615	1.2615		1.2615	1.2615		19,918.4039	19,918.4039	0.3818	0.3652	20,039.6240

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	133479	1.4395	13.0862	10.9924	0.0785		0.9946	0.9946		0.9946	0.9946		15,703.3936	15,703.3936	0.3010	0.2879	15,798.9618
Hospital	33373.7	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	2453.92	0.0265	0.2406	0.2021	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.6965	288.6965	5.5300e-003	5.2900e-003	290.4534
Total		**1.8259**	**16.5987**	**13.9429**	**0.0996**		**1.2615**	**1.2615**		**1.2615**	**1.2615**		**19,918.4039**	**19,918.4039**	**0.3818**	**0.3652**	**20,039.6240**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	33.3737	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	2.45392	0.0265	0.2406	0.2021	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.6965	288.6965	5.5300e-003	5.2900e-003	290.4534
Hospital	133.479	1.4395	13.0862	10.9924	0.0785		0.9946	0.9946		0.9946	0.9946		15,703.3936	15,703.3936	0.3010	0.2879	15,798.9618
Total		**1.8259**	**16.5987**	**13.9429**	**0.0996**		**1.2615**	**1.2615**		**1.2615**	**1.2615**		**19,918.4039**	**19,918.4039**	**0.3818**	**0.3652**	**20,039.6240**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	17.1760	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Unmitigated	17.1760	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.1687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.9998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.5600e-003	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Total	**17.1760**	**7.3000e-004**	**0.0748**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1533**	**0.1533**	**4.6000e-004**		**0.1630**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.1687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.9998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.5600e-003	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Total	**17.1760**	**7.3000e-004**	**0.0748**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1533**	**0.1533**	**4.6000e-004**		**0.1630**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Baseline Operations

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	373.00	Bed	6.13	328,921.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	245.39	1000sqft	5.63	245,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365
tblLandUse	LandUseSquareFeet	266,977.58	328,921.00
tblLandUse	LandUseSquareFeet	245,390.00	245,392.00

tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	17.1760	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Energy	1.8259	16.5987	13.9429	0.0996		1.2615	1.2615		1.2615	1.2615		19,918.4039	19,918.4039	0.3818	0.3652	20,039.6240
Mobile	66.2396	212.2534	743.5742	1.5082	102.5363	3.4144	105.9507	27.3614	3.1365	30.4978		139,533.9810	139,533.9810	5.1637		139,642.4176
Total	**85.2415**	**228.8528**	**757.5918**	**1.6078**	**102.5363**	**4.6761**	**107.2125**	**27.3614**	**4.3983**	**31.7596**		**159,452.5382**	**159,452.5382**	**5.5459**	**0.3652**	**159,682.2045**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	17.1760	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Energy	1.8259	16.5987	13.9429	0.0996		1.2615	1.2615		1.2615	1.2615		19,918.4039	19,918.4039	0.3818	0.3652	20,039.6240
Mobile	60.4673	162.7107	588.6715	1.1179	75.2597	2.5447	77.8044	20.0827	2.3372	22.4199		103,382.5108	103,382.5108	3.9283		103,465.0045
Total	**79.4692**	**179.3101**	**602.6892**	**1.2175**	**75.2597**	**3.8064**	**79.0661**	**20.0827**	**3.5990**	**23.6817**		**123,301.0681**	**123,301.0681**	**4.3105**	**0.3652**	**123,504.7914**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.77**	**21.65**	**20.45**	**24.28**	**26.60**	**18.60**	**26.25**	**26.60**	**18.17**	**25.43**	**0.00**	**22.67**	**22.67**	**22.28**	**0.00**	**22.66**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	60.4673	162.7107	588.6715	1.1179	75.2597	2.5447	77.8044	20.0827	2.3372	22.4199		103,382.5108	103,382.5108	3.9283		103,465.0045
Unmitigated	66.2396	212.2534	743.5742	1.5082	102.5363	3.4144	105.9507	27.3614	3.1365	30.4978		139,533.9810	139,533.9810	5.1637		139,642.4176

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	3,379.38	2,327.52	2058.96	11,787,471	8,631,162
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	3,450.25	2,129.83	1865.00	11,766,813	8,616,036
Medical Office Building	6,205.91	1,538.60	265.02	12,166,376	8,972,615
Total	14,541.36	6,978.71	5,054.15	40,913,968	30,022,519

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466361	0.070248	0.175019	0.170752	0.044803	0.007511	0.012464	0.040207	0.001012	0.001075	0.006379	0.000925	0.003245

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.8259	16.5987	13.9429	0.0996		1.2615	1.2615		1.2615	1.2615		19,918.4039	19,918.4039	0.3818	0.3652	20,039.6240
NaturalGas Unmitigated	1.8259	16.5987	13.9429	0.0996		1.2615	1.2615		1.2615	1.2615		19,918.4039	19,918.4039	0.3818	0.3652	20,039.6240

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	133479	1.4395	13.0862	10.9924	0.0785		0.9946	0.9946		0.9946	0.9946		15,703.3936	15,703.3936	0.3010	0.2879	15,798.9618
Hospital	33373.7	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	2453.92	0.0265	0.2406	0.2021	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.6965	288.6965	5.5300e-003	5.2900e-003	290.4534
Total		**1.8259**	**16.5987**	**13.9429**	**0.0996**		**1.2615**	**1.2615**		**1.2615**	**1.2615**		**19,918.4039**	**19,918.4039**	**0.3818**	**0.3652**	**20,039.6240**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	33.3737	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	2.45392	0.0265	0.2406	0.2021	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.6965	288.6965	5.5300e-003	5.2900e-003	290.4534
Hospital	133.479	1.4395	13.0862	10.9924	0.0785		0.9946	0.9946		0.9946	0.9946		15,703.3936	15,703.3936	0.3010	0.2879	15,798.9618
Total		**1.8259**	**16.5987**	**13.9429**	**0.0996**		**1.2615**	**1.2615**		**1.2615**	**1.2615**		**19,918.4039**	**19,918.4039**	**0.3818**	**0.3652**	**20,039.6240**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	17.1760	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Unmitigated	17.1760	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.1687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.9998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.5600e-003	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Total	**17.1760**	**7.3000e-004**	**0.0748**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1533**	**0.1533**	**4.6000e-004**		**0.1630**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.1687					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.9998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.5600e-003	7.3000e-004	0.0748	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1533	0.1533	4.6000e-004		0.1630
Total	**17.1760**	**7.3000e-004**	**0.0748**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1533**	**0.1533**	**4.6000e-004**		**0.1630**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Baseline Operations

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	373.00	Bed	6.13	328,921.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	245.39	1000sqft	5.63	245,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365

tblLandUse	LandUseSquareFeet	266,977.58	328,921.00
tblLandUse	LandUseSquareFeet	245,390.00	245,392.00
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.1346	1.3000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0254	0.0254	8.0000e-005	0.0000	0.0270
Energy	0.3332	3.0293	2.5446	0.0182		0.2302	0.2302		0.2302	0.2302	0.0000	12,596.1703	12,596.1703	0.2666	0.1025	12,633.5578
Mobile	9.4467	34.7438	109.0354	0.2183	15.5118	0.5255	16.0374	4.1448	0.4828	4.6276	0.0000	18,357.7340	18,357.7340	0.7189	0.0000	18,372.8298
Waste						0.0000	0.0000		0.0000	0.0000	939.3529	0.0000	939.3529	55.5142	0.0000	2,105.1503
Water						0.0000	0.0000		0.0000	0.0000	26.3977	679.1203	705.5180	0.1057	0.0605	726.4869
Total	**12.9145**	**37.7732**	**111.5936**	**0.2365**	**15.5118**	**0.7558**	**16.2676**	**4.1448**	**0.7131**	**4.8579**	**965.7506**	**31,633.0499**	**32,598.8005**	**56.6054**	**0.1630**	**33,838.0518**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.1346	1.3000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0254	0.0254	8.0000e-005	0.0000	0.0270
Energy	0.3332	3.0293	2.5446	0.0182		0.2302	0.2302		0.2302	0.2302	0.0000	12,596.1703	12,596.1703	0.2666	0.1025	12,633.5578
Mobile	8.5841	26.5659	88.0260	0.1619	11.3825	0.3918	11.7743	3.0414	0.3599	3.4013	0.0000	13,601.4963	13,601.4963	0.5466	0.0000	13,612.9741
Waste						0.0000	0.0000		0.0000	0.0000	939.3529	0.0000	939.3529	55.5142	0.0000	2,105.1503
Water						0.0000	0.0000		0.0000	0.0000	26.3977	679.1203	705.5180	0.1052	0.0604	726.4448
Total	**12.0519**	**29.5952**	**90.5842**	**0.1800**	**11.3825**	**0.6221**	**12.0046**	**3.0414**	**0.5902**	**3.6316**	**965.7506**	**26,876.8123**	**27,842.5629**	**56.4326**	**0.1629**	**29,078.1540**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.68**	**21.65**	**18.83**	**23.88**	**26.62**	**17.69**	**26.21**	**26.62**	**17.23**	**25.24**	**0.00**	**15.04**	**14.59**	**0.31**	**0.06**	**14.07**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.5841	26.5659	88.0260	0.1619	11.3825	0.3918	11.7743	3.0414	0.3599	3.4013	0.0000	13,601.4963	13,601.4963	0.5466	0.0000	13,612.9741
Unmitigated	9.4467	34.7438	109.0354	0.2183	15.5118	0.5255	16.0374	4.1448	0.4828	4.6276	0.0000	18,357.7340	18,357.7340	0.7189	0.0000	18,372.8298

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	3,379.38	2,327.52	2058.96	11,787,471	8,631,162
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	3,450.25	2,129.83	1865.00	11,766,813	8,616,036
Medical Office Building	6,205.91	1,538.60	265.02	12,166,376	8,972,615
Total	14,541.36	6,978.71	5,054.15	40,913,968	30,022,519

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466361	0.070248	0.175019	0.170752	0.044803	0.007511	0.012464	0.040207	0.001012	0.001075	0.006379	0.000925	0.003245

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,298.4551	9,298.4551	0.2034	0.0421	9,315.7733
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,298.4551	9,298.4551	0.2034	0.0421	9,315.7733
NaturalGas Mitigated	0.3332	3.0293	2.5446	0.0182		0.2302	0.2302		0.2302	0.2302	0.0000	3,297.7152	3,297.7152	0.0632	0.0605	3,317.7845
NaturalGas Unmitigated	0.3332	3.0293	2.5446	0.0182		0.2302	0.2302		0.2302	0.2302	0.0000	3,297.7152	3,297.7152	0.0632	0.0605	3,317.7845

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	1.21814e+007	0.0657	0.5971	0.5016	3.5800e-003		0.0454	0.0454		0.0454	0.0454	0.0000	650.0453	650.0453	0.0125	0.0119	654.0014
Hospital	4.87198e+007	0.2627	2.3882	2.0061	0.0143		0.1815	0.1815		0.1815	0.1815	0.0000	2,599.8729	2,599.8729	0.0498	0.0477	2,615.6953
Medical Office Building	895681	4.8300e-003	0.0439	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.7969	47.7969	9.2000e-004	8.8000e-004	48.0878
Total		**0.3332**	**3.0293**	**2.5446**	**0.0182**		**0.2302**	**0.2302**		**0.2302**	**0.2302**	**0.0000**	**3,297.7152**	**3,297.7152**	**0.0632**	**0.0605**	**3,317.7845**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	4.87198e+007	0.2627	2.3882	2.0061	0.0143		0.1815	0.1815		0.1815	0.1815	0.0000	2,599.8729	2,599.8729	0.0498	0.0477	2,615.6953
Medical Office Building	895681	4.8300e-003	0.0439	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.7969	47.7969	9.2000e-004	8.8000e-004	48.0878
Hospital	1.21814e+007	0.0657	0.5971	0.5016	3.5800e-003		0.0454	0.0454		0.0454	0.0454	0.0000	650.0453	650.0453	0.0125	0.0119	654.0014
Total		**0.3332**	**3.0293**	**2.5446**	**0.0182**		**0.2302**	**0.2302**		**0.2302**	**0.2302**	**0.0000**	**3,297.7152**	**3,297.7152**	**0.0632**	**0.0605**	**3,317.7845**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.02722e+007	6,176.7241	0.1351	0.0280	6,188.2281
Hospital	2.56836e+006	1,544.3641	0.0338	6.9900e-003	1,547.2405
Medical Office Building	2.62324e+006	1,577.3669	0.0345	7.1400e-003	1,580.3047
Total		**9,298.4551**	**0.2034**	**0.0421**	**9,315.7733**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.02722e+007	6,176.7241	0.1351	0.0280	6,188.2281
Hospital	2.56836e+006	1,544.3641	0.0338	6.9900e-003	1,547.2405
Medical Office Building	2.62324e+006	1,577.3669	0.0345	7.1400e-003	1,580.3047
Total		**9,298.4551**	**0.2034**	**0.0421**	**9,315.7733**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.1346	1.3000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0254	0.0254	8.0000e-005	0.0000	0.0270
Unmitigated	3.1346	1.3000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0254	0.0254	8.0000e-005	0.0000	0.0270

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.7608					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.3725					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3800e-003	1.3000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0254	0.0254	8.0000e-005	0.0000	0.0270
Total	**3.1346**	**1.3000e-004**	**0.0137**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0254**	**0.0254**	**8.0000e-005**	**0.0000**	**0.0270**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.7608					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.3725					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3800e-003	1.3000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0254	0.0254	8.0000e-005	0.0000	0.0270
Total	**3.1346**	**1.3000e-004**	**0.0137**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0254**	**0.0254**	**8.0000e-005**	**0.0000**	**0.0270**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	705.5180	0.1052	0.0604	726.4448
Unmitigated	705.5180	0.1057	0.0605	726.4869

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	10.3195 / 1.96562	97.5800	0.0146	8.3600e-003	100.4802
Hospital	33.5005 / 6.38105	316.7761	0.0475	0.0272	326.1911
Medical Office Building	30.7917 / 5.86508	291.1619	0.0436	0.0250	299.8156
Total		**705.5180**	**0.1057**	**0.0605**	**726.4869**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	10.3195 / 1.96562	97.5800	0.0146	8.3500e-003	100.4744
Hospital	33.5005 / 6.38105	316.7761	0.0472	0.0271	326.1722
Medical Office Building	30.7917 / 5.86508	291.1619	0.0434	0.0249	299.7982
Total		**705.5180**	**0.1052**	**0.0604**	**726.4448**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	939.3529	55.5142	0.0000	2,105.1503
Unmitigated	939.3529	55.5142	0.0000	2,105.1503

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1089.16	221.0896	13.0660	0.0000	495.4761
Hospital	888.19	180.2945	10.6551	0.0000	404.0517
Medical Office Building	2650.21	537.9687	31.7930	0.0000	1,205.6225
Total		**939.3529**	**55.5142**	**0.0000**	**2,105.1503**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1089.16	221.0896	13.0660	0.0000	495.4761
Hospital	888.19	180.2945	10.6551	0.0000	404.0517
Medical Office Building	2650.21	537.9687	31.7930	0.0000	1,205.6225
Total		**939.3529**	**55.5142**	**0.0000**	**2,105.1503**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Expansion Project Phase I Construction

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	189.00	Bed	3.11	251,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Land Use - Phase I hospital bed tower 251,500 sq ft

Demolition - Demo Bldg N 61,135 sq ft

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	127.00
tblConstructionPhase	NumDays	230.00	561.00
tblConstructionPhase	NumDays	20.00	72.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	18.00	70.00

tblConstructionPhase	PhaseEndDate	6/21/2017	12/20/2016
tblConstructionPhase	PhaseEndDate	3/28/2017	3/13/2017
tblConstructionPhase	PhaseStartDate	12/27/2016	6/27/2016
tblConstructionPhase	PhaseStartDate	11/1/2014	11/3/2014
tblConstructionPhase	PhaseStartDate	12/21/2016	12/6/2016
tblGrading	AcresOfGrading	4.50	4.00
tblGrading	MaterialExported	0.00	17,740.00
tblLandUse	LandUseSquareFeet	135,278.18	251,500.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	80.00	23.00
tblTripsAndVMT	WorkerTripNumber	16.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	8.5793	126.0857	76.6647	0.2056	9.7037	4.0633	13.7670	3.7932	3.7379	7.5310	0.0000	21,215.2910	21,215.2910	1.0180	0.0000	21,236.6680
2015	3.9877	33.1984	23.4661	0.0374	0.5150	2.0745	2.5896	0.1419	1.9515	2.0934	0.0000	3,714.2205	3,714.2205	0.6676	0.0000	3,728.2401
2016	17.0725	48.2724	35.5148	0.0576	0.6827	2.9774	3.6601	0.1863	2.8091	2.9954	0.0000	5,689.2176	5,689.2176	1.1183	0.0000	5,712.7015
2017	1.0500	11.0741	8.5717	0.0137	0.1118	0.5977	0.7094	0.0296	0.5498	0.5795	0.0000	1,376.0372	1,376.0372	0.3962	0.0000	1,384.3568

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	8.5793	126.0857	76.6647	0.2056	6.5089	4.0633	10.5721	2.2247	3.7379	5.9625	0.0000	21,215.2910	21,215.2910	1.0180	0.0000	21,236.6679
2015	3.9877	33.1984	23.4661	0.0374	0.5150	2.0745	2.5896	0.1419	1.9515	2.0934	0.0000	3,714.2205	3,714.2205	0.6676	0.0000	3,728.2401
2016	17.0725	48.2724	35.5148	0.0576	0.6827	2.9774	3.6601	0.1863	2.8091	2.9954	0.0000	5,689.2176	5,689.2176	1.1183	0.0000	5,712.7015
2017	1.0500	11.0741	8.5717	0.0137	0.1118	0.5977	0.7094	0.0296	0.5498	0.5795	0.0000	1,376.0372	1,376.0372	0.3962	0.0000	1,384.3568

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**29.01**	**0.00**	**15.41**	**37.79**	**0.00**	**11.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/26/2014	10/3/2014	5	72	
2	Grading	Grading	10/4/2014	10/16/2014	5	9	
3	Trenching	Trenching	10/17/2014	10/31/2014	5	11	
4	Building Construction	Building Construction	11/3/2014	12/26/2016	5	561	
5	Architectural Coating	Architectural Coating	6/27/2016	12/20/2016	5	127	
6	Paving	Paving	12/6/2016	3/13/2017	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 377,250; Non-Residential Outdoor: 125,750 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Building Construction	Cranes	2	4.00	226	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	1	6.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	2,218.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	41.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8410	0.0000	0.8410	0.1273	0.0000	0.1273			0.0000			0.0000
Off-Road	3.3200	37.8059	27.3915	0.0307		1.7932	1.7932		1.6525	1.6525		3,216.5522	3,216.5522	0.9285		3,236.0507
Total	**3.3200**	**37.8059**	**27.3915**	**0.0307**	**0.8410**	**1.7932**	**2.6342**	**0.1273**	**1.6525**	**1.7798**		**3,216.5522**	**3,216.5522**	**0.9285**		**3,236.0507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0777	1.3869	0.8110	2.7600e-003	0.0674	0.0291	0.0965	0.0185	0.0268	0.0452		283.9594	283.9594	2.2600e-003		284.0069
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0912	0.9202	1.8500e-003	0.1677	1.1800e-003	0.1688	0.0445	1.0700e-003	0.0455		164.4632	164.4632	8.7200e-003		164.6464
Total	**0.1465**	**1.4780**	**1.7312**	**4.6100e-003**	**0.2350**	**0.0303**	**0.2653**	**0.0629**	**0.0279**	**0.0908**		**448.4226**	**448.4226**	**0.0110**		**448.6533**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3280	0.0000	0.3280	0.0497	0.0000	0.0497			0.0000			0.0000
Off-Road	3.3200	37.8059	27.3915	0.0307		1.7932	1.7932		1.6525	1.6525	0.0000	3,216.5522	3,216.5522	0.9285		3,236.0507
Total	**3.3200**	**37.8059**	**27.3915**	**0.0307**	**0.3280**	**1.7932**	**2.1212**	**0.0497**	**1.6525**	**1.7021**	**0.0000**	**3,216.5522**	**3,216.5522**	**0.9285**		**3,236.0507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0777	1.3869	0.8110	2.7600e-003	0.0674	0.0291	0.0965	0.0185	0.0268	0.0452		283.9594	283.9594	2.2600e-003		284.0069
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0912	0.9202	1.8500e-003	0.1677	1.1800e-003	0.1688	0.0445	1.0700e-003	0.0455		164.4632	164.4632	8.7200e-003		164.6464
Total	**0.1465**	**1.4780**	**1.7312**	**4.6100e-003**	**0.2350**	**0.0303**	**0.2653**	**0.0629**	**0.0279**	**0.0908**		**448.4226**	**448.4226**	**0.0110**		**448.6533**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.2375	0.0000	5.2375	2.5714	0.0000	2.5714			0.0000			0.0000
Off-Road	3.5488	37.4756	23.9813	0.0276		2.2025	2.2025		2.0263	2.0263		2,926.4574	2,926.4574	0.8648		2,944.6182
Total	**3.5488**	**37.4756**	**23.9813**	**0.0276**	**5.2375**	**2.2025**	**7.4400**	**2.5714**	**2.0263**	**4.5976**		**2,926.4574**	**2,926.4574**	**0.8648**		**2,944.6182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9618	88.5190	51.7632	0.1762	4.2986	1.8596	6.1582	1.1774	1.7105	2.8879		18,124.3704	18,124.3704	0.1444		18,127.4034
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0912	0.9202	1.8500e-003	0.1677	1.1800e-003	0.1688	0.0445	1.0700e-003	0.0455		164.4632	164.4632	8.7200e-003		164.6464
Total	**5.0305**	**88.6101**	**52.6834**	**0.1780**	**4.4662**	**1.8608**	**6.3270**	**1.2218**	**1.7116**	**2.9334**		**18,288.8336**	**18,288.8336**	**0.1532**		**18,292.0498**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0426	0.0000	2.0426	1.0028	0.0000	1.0028			0.0000			0.0000
Off-Road	3.5488	37.4756	23.9813	0.0276		2.2025	2.2025		2.0263	2.0263	0.0000	2,926.4574	2,926.4574	0.8648		2,944.6182
Total	**3.5488**	**37.4756**	**23.9813**	**0.0276**	**2.0426**	**2.2025**	**4.2451**	**1.0028**	**2.0263**	**3.0291**	**0.0000**	**2,926.4574**	**2,926.4574**	**0.8648**		**2,944.6182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9618	88.5190	51.7632	0.1762	4.2986	1.8596	6.1582	1.1774	1.7105	2.8879		18,124.3704	18,124.3704	0.1444		18,127.4034
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0912	0.9202	1.8500e-003	0.1677	1.1800e-003	0.1688	0.0445	1.0700e-003	0.0455		164.4632	164.4632	8.7200e-003		164.6464
Total	**5.0305**	**88.6101**	**52.6834**	**0.1780**	**4.4662**	**1.8608**	**6.3270**	**1.2218**	**1.7116**	**2.9334**		**18,288.8336**	**18,288.8336**	**0.1532**		**18,292.0498**

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7920	8.5889	5.8474	8.4100e-003		0.5260	0.5260		0.4840	0.4840		892.2874	892.2874	0.2637		897.8247
Total	**0.7920**	**8.5889**	**5.8474**	**8.4100e-003**		**0.5260**	**0.5260**		**0.4840**	**0.4840**		**892.2874**	**892.2874**	**0.2637**		**897.8247**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0229	0.0304	0.3067	6.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		54.8211	54.8211	2.9100e-003		54.8821
Total	**0.0229**	**0.0304**	**0.3067**	**6.2000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**54.8211**	**54.8211**	**2.9100e-003**		**54.8821**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7920	8.5889	5.8474	8.4100e-003		0.5260	0.5260		0.4840	0.4840	0.0000	892.2874	892.2874	0.2637		897.8247
Total	**0.7920**	**8.5889**	**5.8474**	**8.4100e-003**		**0.5260**	**0.5260**		**0.4840**	**0.4840**	**0.0000**	**892.2874**	**892.2874**	**0.2637**		**897.8247**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0229	0.0304	0.3067	6.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		54.8211	54.8211	2.9100e-003		54.8821
Total	**0.0229**	**0.0304**	**0.3067**	**6.2000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**54.8211**	**54.8211**	**2.9100e-003**		**54.8821**

3.5 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7140	30.2395	18.0431	0.0260		2.0999	2.0999		1.9795	1.9795		2,621.9860	2,621.9860	0.6631		2,635.9109
Total	**3.7140**	**30.2395**	**18.0431**	**0.0260**		**2.0999**	**2.0999**		**1.9795**	**1.9795**		**2,621.9860**	**2,621.9860**	**0.6631**		**2,635.9109**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4443	4.6441	4.7147	8.6200e-003	0.2579	0.1027	0.3607	0.0737	0.0945	0.1681		881.7077	881.7077	7.5700e-003		881.8666
Worker	0.1054	0.1398	1.4109	2.8300e-003	0.2571	1.8000e-003	0.2589	0.0682	1.6500e-003	0.0698		252.1769	252.1769	0.0134		252.4578
Total	**0.5497**	**4.7839**	**6.1257**	**0.0115**	**0.5150**	**0.1045**	**0.6196**	**0.1419**	**0.0961**	**0.2380**		**1,133.8846**	**1,133.8846**	**0.0209**		**1,134.3244**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7140	30.2395	18.0431	0.0260		2.0999	2.0999		1.9795	1.9795	0.0000	2,621.9860	2,621.9860	0.6631		2,635.9109
Total	**3.7140**	**30.2395**	**18.0431**	**0.0260**		**2.0999**	**2.0999**		**1.9795**	**1.9795**	**0.0000**	**2,621.9860**	**2,621.9860**	**0.6631**		**2,635.9109**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4443	4.6441	4.7147	8.6200e-003	0.2579	0.1027	0.3607	0.0737	0.0945	0.1681		881.7077	881.7077	7.5700e-003		881.8666
Worker	0.1054	0.1398	1.4109	2.8300e-003	0.2571	1.8000e-003	0.2589	0.0682	1.6500e-003	0.0698		252.1769	252.1769	0.0134		252.4578
Total	**0.5497**	**4.7839**	**6.1257**	**0.0115**	**0.5150**	**0.1045**	**0.6196**	**0.1419**	**0.0961**	**0.2380**		**1,133.8846**	**1,133.8846**	**0.0209**		**1,134.3244**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5106	29.0589	17.8523	0.0260		1.9929	1.9929		1.8765	1.8765		2,603.2546	2,603.2546	0.6491		2,616.8846
Total	**3.5106**	**29.0589**	**17.8523**	**0.0260**		**1.9929**	**1.9929**		**1.8765**	**1.8765**		**2,603.2546**	**2,603.2546**	**0.6491**		**2,616.8846**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3835	4.0156	4.3598	8.5800e-003	0.2580	0.0799	0.3379	0.0737	0.0735	0.1472		868.9060	868.9060	6.5100e-003		869.0426
Worker	0.0937	0.1238	1.2540	2.8200e-003	0.2571	1.6800e-003	0.2588	0.0682	1.5400e-003	0.0697		242.0600	242.0600	0.0121		242.3130
Total	**0.4771**	**4.1395**	**5.6138**	**0.0114**	**0.5150**	**0.0816**	**0.5966**	**0.1419**	**0.0750**	**0.2169**		**1,110.9659**	**1,110.9659**	**0.0186**		**1,111.3555**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5106	29.0589	17.8523	0.0260		1.9929	1.9929		1.8765	1.8765	0.0000	2,603.2546	2,603.2546	0.6491		2,616.8846
Total	**3.5106**	**29.0589**	**17.8523**	**0.0260**		**1.9929**	**1.9929**		**1.8765**	**1.8765**	**0.0000**	**2,603.2546**	**2,603.2546**	**0.6491**		**2,616.8846**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3835	4.0156	4.3598	8.5800e-003	0.2580	0.0799	0.3379	0.0737	0.0735	0.1472		868.9060	868.9060	6.5100e-003		869.0426
Worker	0.0937	0.1238	1.2540	2.8200e-003	0.2571	1.6800e-003	0.2588	0.0682	1.5400e-003	0.0697		242.0600	242.0600	0.0121		242.3130
Total	**0.4771**	**4.1395**	**5.6138**	**0.0114**	**0.5150**	**0.0816**	**0.5966**	**0.1419**	**0.0750**	**0.2169**		**1,110.9659**	**1,110.9659**	**0.0186**		**1,111.3555**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2693	27.6195	17.6167	0.0260		1.8525	1.8525		1.7427	1.7427		2,583.8438	2,583.8438	0.6363		2,597.2052
Total	**3.2693**	**27.6195**	**17.6167**	**0.0260**		**1.8525**	**1.8525**		**1.7427**	**1.7427**		**2,583.8438**	**2,583.8438**	**0.6363**		**2,597.2052**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3398	3.5269	4.0964	8.5600e-003	0.2580	0.0674	0.3253	0.0737	0.0620	0.1356		858.7519	858.7519	5.8300e-003		858.8742
Worker	0.0841	0.1109	1.1239	2.8200e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		233.2170	233.2170	0.0110		233.4481
Total	**0.4239**	**3.6378**	**5.2203**	**0.0114**	**0.5150**	**0.0690**	**0.5840**	**0.1419**	**0.0634**	**0.2053**		**1,091.9689**	**1,091.9689**	**0.0168**		**1,092.3224**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2693	27.6195	17.6167	0.0260		1.8525	1.8525		1.7427	1.7427	0.0000	2,583.8438	2,583.8438	0.6363		2,597.2052
Total	**3.2693**	**27.6195**	**17.6167**	**0.0260**		**1.8525**	**1.8525**		**1.7427**	**1.7427**	**0.0000**	**2,583.8438**	**2,583.8438**	**0.6363**		**2,597.2052**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3398	3.5269	4.0964	8.5600e-003	0.2580	0.0674	0.3253	0.0737	0.0620	0.1356		858.7519	858.7519	5.8300e-003		858.8742
Worker	0.0841	0.1109	1.1239	2.8200e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		233.2170	233.2170	0.0110		233.4481
Total	**0.4239**	**3.6378**	**5.2203**	**0.0114**	**0.5150**	**0.0690**	**0.5840**	**0.1419**	**0.0634**	**0.2053**		**1,091.9689**	**1,091.9689**	**0.0168**		**1,092.3224**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7369	4.7445	3.7678	5.9400e-003		0.3932	0.3932		0.3932	0.3932		562.8961	562.8961	0.0664		564.2897
Total	**12.2104**	**4.7445**	**3.7678**	**5.9400e-003**		**0.3932**	**0.3932**		**0.3932**	**0.3932**		**562.8961**	**562.8961**	**0.0664**		**564.2897**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0183	0.0241	0.2443	6.1000e-004	0.0559	3.5000e-004	0.0562	0.0148	3.2000e-004	0.0151		50.6994	50.6994	2.3900e-003		50.7496
Total	**0.0183**	**0.0241**	**0.2443**	**6.1000e-004**	**0.0559**	**3.5000e-004**	**0.0562**	**0.0148**	**3.2000e-004**	**0.0151**		**50.6994**	**50.6994**	**2.3900e-003**		**50.7496**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7369	4.7445	3.7678	5.9400e-003		0.3932	0.3932		0.3932	0.3932	0.0000	562.8961	562.8961	0.0664		564.2897
Total	**12.2104**	**4.7445**	**3.7678**	**5.9400e-003**		**0.3932**	**0.3932**		**0.3932**	**0.3932**	**0.0000**	**562.8961**	**562.8961**	**0.0664**		**564.2897**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0183	0.0241	0.2443	6.1000e-004	0.0559	3.5000e-004	0.0562	0.0148	3.2000e-004	0.0151		50.6994	50.6994	2.3900e-003		50.7496
Total	**0.0183**	**0.0241**	**0.2443**	**6.1000e-004**	**0.0559**	**3.5000e-004**	**0.0562**	**0.0148**	**3.2000e-004**	**0.0151**		**50.6994**	**50.6994**	**2.3900e-003**		**50.7496**

3.7 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1141	12.1984	8.1771	0.0125		0.6617	0.6617		0.6088	0.6088		1,298.4108	1,298.4108	0.3917		1,306.6354
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1141**	**12.1984**	**8.1771**	**0.0125**		**0.6617**	**0.6617**		**0.6088**	**0.6088**		**1,298.4108**	**1,298.4108**	**0.3917**		**1,306.6354**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0366	0.0482	0.4887	1.2200e-003	0.1118	7.0000e-004	0.1125	0.0296	6.4000e-004	0.0303		101.3987	101.3987	4.7900e-003		101.4992
Total	**0.0366**	**0.0482**	**0.4887**	**1.2200e-003**	**0.1118**	**7.0000e-004**	**0.1125**	**0.0296**	**6.4000e-004**	**0.0303**		**101.3987**	**101.3987**	**4.7900e-003**		**101.4992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1141	12.1984	8.1771	0.0125		0.6617	0.6617		0.6088	0.6088	0.0000	1,298.4108	1,298.4108	0.3917		1,306.6354
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1141**	**12.1984**	**8.1771**	**0.0125**		**0.6617**	**0.6617**		**0.6088**	**0.6088**	**0.0000**	**1,298.4108**	**1,298.4108**	**0.3917**		**1,306.6354**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0366	0.0482	0.4887	1.2200e-003	0.1118	7.0000e-004	0.1125	0.0296	6.4000e-004	0.0303		101.3987	101.3987	4.7900e-003		101.4992
Total	**0.0366**	**0.0482**	**0.4887**	**1.2200e-003**	**0.1118**	**7.0000e-004**	**0.1125**	**0.0296**	**6.4000e-004**	**0.0303**		**101.3987**	**101.3987**	**4.7900e-003**		**101.4992**

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0173	11.0309	8.1341	0.0125		0.5970	0.5970		0.5492	0.5492		1,278.6641	1,278.6641	0.3918		1,286.8915
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0173**	**11.0309**	**8.1341**	**0.0125**		**0.5970**	**0.5970**		**0.5492**	**0.5492**		**1,278.6641**	**1,278.6641**	**0.3918**		**1,286.8915**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0432	0.4376	1.2200e-003	0.1118	6.8000e-004	0.1125	0.0296	6.3000e-004	0.0303		97.3731	97.3731	4.3900e-003		97.4653
Total	**0.0327**	**0.0432**	**0.4376**	**1.2200e-003**	**0.1118**	**6.8000e-004**	**0.1125**	**0.0296**	**6.3000e-004**	**0.0303**		**97.3731**	**97.3731**	**4.3900e-003**		**97.4653**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0173	11.0309	8.1341	0.0125		0.5970	0.5970		0.5492	0.5492	0.0000	1,278.6641	1,278.6641	0.3918		1,286.8915
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0173**	**11.0309**	**8.1341**	**0.0125**		**0.5970**	**0.5970**		**0.5492**	**0.5492**	**0.0000**	**1,278.6641**	**1,278.6641**	**0.3918**		**1,286.8915**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0432	0.4376	1.2200e-003	0.1118	6.8000e-004	0.1125	0.0296	6.3000e-004	0.0303		97.3731	97.3731	4.3900e-003		97.4653
Total	**0.0327**	**0.0432**	**0.4376**	**1.2200e-003**	**0.1118**	**6.8000e-004**	**0.1125**	**0.0296**	**6.3000e-004**	**0.0303**		**97.3731**	**97.3731**	**4.3900e-003**		**97.4653**

RCH Expansion Project Phase I Construction

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	189.00	Bed	3.11	251,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Land Use - Phase I hospital bed tower 251,500 sq ft

Demolition - Demo Bldg N 61,135 sq ft

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	127.00
tblConstructionPhase	NumDays	230.00	561.00
tblConstructionPhase	NumDays	20.00	72.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	18.00	70.00

tblConstructionPhase	PhaseEndDate	6/21/2017	12/20/2016
tblConstructionPhase	PhaseEndDate	3/28/2017	3/13/2017
tblConstructionPhase	PhaseStartDate	12/27/2016	6/27/2016
tblConstructionPhase	PhaseStartDate	11/1/2014	11/3/2014
tblConstructionPhase	PhaseStartDate	12/21/2016	12/6/2016
tblGrading	AcresOfGrading	4.50	4.00
tblGrading	MaterialExported	0.00	17,740.00
tblLandUse	LandUseSquareFeet	135,278.18	251,500.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	80.00	23.00
tblTripsAndVMT	WorkerTripNumber	16.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	8.3917	122.7952	72.9340	0.2061	9.7037	4.0576	13.7614	3.7932	3.7327	7.5258	0.0000	21,275.0829	21,275.0829	1.0161	0.0000	21,296.4218
2015	3.9684	33.0886	23.1751	0.0377	0.5150	2.0737	2.5887	0.1419	1.9507	2.0926	0.0000	3,744.5582	3,744.5582	0.6674	0.0000	3,758.5736
2016	17.0583	48.1748	35.3194	0.0582	0.6827	2.9768	3.6595	0.1863	2.8085	2.9949	0.0000	5,733.0405	5,733.0405	1.1181	0.0000	5,756.5204
2017	1.0516	11.0715	8.6434	0.0138	0.1118	0.5977	0.7094	0.0296	0.5498	0.5795	0.0000	1,385.2297	1,385.2297	0.3962	0.0000	1,393.5493

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	8.3917	122.7952	72.9340	0.2061	6.5089	4.0576	10.5665	2.2247	3.7327	5.9573	0.0000	21,275.0829	21,275.0829	1.0161	0.0000	21,296.4218
2015	3.9684	33.0886	23.1751	0.0377	0.5150	2.0737	2.5887	0.1419	1.9507	2.0926	0.0000	3,744.5582	3,744.5582	0.6674	0.0000	3,758.5736
2016	17.0583	48.1748	35.3194	0.0582	0.6827	2.9768	3.6595	0.1863	2.8085	2.9949	0.0000	5,733.0405	5,733.0405	1.1181	0.0000	5,756.5203
2017	1.0516	11.0715	8.6434	0.0138	0.1118	0.5977	0.7094	0.0296	0.5498	0.5795	0.0000	1,385.2297	1,385.2297	0.3962	0.0000	1,393.5493

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**29.01**	**0.00**	**15.42**	**37.79**	**0.00**	**11.89**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/26/2014	10/3/2014	5	72	
2	Grading	Grading	10/4/2014	10/16/2014	5	9	
3	Trenching	Trenching	10/17/2014	10/31/2014	5	11	
4	Building Construction	Building Construction	11/3/2014	12/26/2016	5	561	
5	Architectural Coating	Architectural Coating	6/27/2016	12/20/2016	5	127	
6	Paving	Paving	12/6/2016	3/13/2017	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 377,250; Non-Residential Outdoor: 125,750 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Building Construction	Cranes	2	4.00	226	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	1	6.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	2,218.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	41.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8410	0.0000	0.8410	0.1273	0.0000	0.1273			0.0000			0.0000
Off-Road	3.3200	37.8059	27.3915	0.0307		1.7932	1.7932		1.6525	1.6525		3,216.5522	3,216.5522	0.9285		3,236.0507
Total	**3.3200**	**37.8059**	**27.3915**	**0.0307**	**0.8410**	**1.7932**	**2.6342**	**0.1273**	**1.6525**	**1.7798**		**3,216.5522**	**3,216.5522**	**0.9285**		**3,236.0507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0748	1.3354	0.7503	2.7700e-003	0.0674	0.0291	0.0964	0.0185	0.0267	0.0452		284.6538	284.6538	2.2300e-003		284.7007
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0717	0.0855	1.0623	2.0200e-003	0.1677	1.1800e-003	0.1688	0.0445	1.0700e-003	0.0455		179.9322	179.9322	8.7200e-003		180.1154
Total	**0.1465**	**1.4208**	**1.8126**	**4.7900e-003**	**0.2350**	**0.0302**	**0.2652**	**0.0629**	**0.0278**	**0.0907**		**464.5860**	**464.5860**	**0.0110**		**464.8161**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3280	0.0000	0.3280	0.0497	0.0000	0.0497			0.0000			0.0000
Off-Road	3.3200	37.8059	27.3915	0.0307		1.7932	1.7932		1.6525	1.6525	0.0000	3,216.5522	3,216.5522	0.9285		3,236.0507
Total	**3.3200**	**37.8059**	**27.3915**	**0.0307**	**0.3280**	**1.7932**	**2.1212**	**0.0497**	**1.6525**	**1.7021**	**0.0000**	**3,216.5522**	**3,216.5522**	**0.9285**		**3,236.0507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0748	1.3354	0.7503	2.7700e-003	0.0674	0.0291	0.0964	0.0185	0.0267	0.0452		284.6538	284.6538	2.2300e-003		284.7007
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0717	0.0855	1.0623	2.0200e-003	0.1677	1.1800e-003	0.1688	0.0445	1.0700e-003	0.0455		179.9322	179.9322	8.7200e-003		180.1154
Total	**0.1465**	**1.4208**	**1.8126**	**4.7900e-003**	**0.2350**	**0.0302**	**0.2652**	**0.0629**	**0.0278**	**0.0907**		**464.5860**	**464.5860**	**0.0110**		**464.8161**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.2375	0.0000	5.2375	2.5714	0.0000	2.5714			0.0000			0.0000
Off-Road	3.5488	37.4756	23.9813	0.0276		2.2025	2.2025		2.0263	2.0263		2,926.4574	2,926.4574	0.8648		2,944.6182
Total	**3.5488**	**37.4756**	**23.9813**	**0.0276**	**5.2375**	**2.2025**	**7.4400**	**2.5714**	**2.0263**	**4.5976**		**2,926.4574**	**2,926.4574**	**0.8648**		**2,944.6182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.7712	85.2342	47.8904	0.1766	4.2986	1.8540	6.1526	1.1774	1.7053	2.8827		18,168.6933	18,168.6933	0.1426		18,171.6883
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0717	0.0855	1.0623	2.0200e-003	0.1677	1.1800e-003	0.1688	0.0445	1.0700e-003	0.0455		179.9322	179.9322	8.7200e-003		180.1154
Total	**4.8429**	**85.3197**	**48.9527**	**0.1786**	**4.4662**	**1.8552**	**6.3214**	**1.2218**	**1.7064**	**2.9282**		**18,348.6255**	**18,348.6255**	**0.1513**		**18,351.8037**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0426	0.0000	2.0426	1.0028	0.0000	1.0028			0.0000			0.0000
Off-Road	3.5488	37.4756	23.9813	0.0276		2.2025	2.2025		2.0263	2.0263	0.0000	2,926.4574	2,926.4574	0.8648		2,944.6182
Total	**3.5488**	**37.4756**	**23.9813**	**0.0276**	**2.0426**	**2.2025**	**4.2451**	**1.0028**	**2.0263**	**3.0291**	**0.0000**	**2,926.4574**	**2,926.4574**	**0.8648**		**2,944.6182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.7712	85.2342	47.8904	0.1766	4.2986	1.8540	6.1526	1.1774	1.7053	2.8827		18,168.6933	18,168.6933	0.1426		18,171.6883
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0717	0.0855	1.0623	2.0200e-003	0.1677	1.1800e-003	0.1688	0.0445	1.0700e-003	0.0455		179.9322	179.9322	8.7200e-003		180.1154
Total	**4.8429**	**85.3197**	**48.9527**	**0.1786**	**4.4662**	**1.8552**	**6.3214**	**1.2218**	**1.7064**	**2.9282**		**18,348.6255**	**18,348.6255**	**0.1513**		**18,351.8037**

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7920	8.5889	5.8474	8.4100e-003		0.5260	0.5260		0.4840	0.4840		892.2874	892.2874	0.2637		897.8247
Total	**0.7920**	**8.5889**	**5.8474**	**8.4100e-003**		**0.5260**	**0.5260**		**0.4840**	**0.4840**		**892.2874**	**892.2874**	**0.2637**		**897.8247**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0285	0.3541	6.7000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		59.9774	59.9774	2.9100e-003		60.0385
Total	**0.0239**	**0.0285**	**0.3541**	**6.7000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**59.9774**	**59.9774**	**2.9100e-003**		**60.0385**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7920	8.5889	5.8474	8.4100e-003		0.5260	0.5260		0.4840	0.4840	0.0000	892.2874	892.2874	0.2637		897.8247
Total	**0.7920**	**8.5889**	**5.8474**	**8.4100e-003**		**0.5260**	**0.5260**		**0.4840**	**0.4840**	**0.0000**	**892.2874**	**892.2874**	**0.2637**		**897.8247**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0285	0.3541	6.7000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		59.9774	59.9774	2.9100e-003		60.0385
Total	**0.0239**	**0.0285**	**0.3541**	**6.7000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**59.9774**	**59.9774**	**2.9100e-003**		**60.0385**

3.5 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7140	30.2395	18.0431	0.0260		2.0999	2.0999		1.9795	1.9795		2,621.9860	2,621.9860	0.6631		2,635.9109
Total	**3.7140**	**30.2395**	**18.0431**	**0.0260**		**2.0999**	**2.0999**		**1.9795**	**1.9795**		**2,621.9860**	**2,621.9860**	**0.6631**		**2,635.9109**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4173	4.5211	4.2367	8.6900e-003	0.2579	0.1015	0.3595	0.0737	0.0934	0.1670		889.2729	889.2729	7.3600e-003		889.4275
Worker	0.1100	0.1310	1.6289	3.1000e-003	0.2571	1.8000e-003	0.2589	0.0682	1.6500e-003	0.0698		275.8961	275.8961	0.0134		276.1770
Total	**0.5273**	**4.6521**	**5.8656**	**0.0118**	**0.5150**	**0.1033**	**0.6184**	**0.1419**	**0.0950**	**0.2369**		**1,165.1690**	**1,165.1690**	**0.0207**		**1,165.6044**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7140	30.2395	18.0431	0.0260		2.0999	2.0999		1.9795	1.9795	0.0000	2,621.9860	2,621.9860	0.6631		2,635.9109
Total	**3.7140**	**30.2395**	**18.0431**	**0.0260**		**2.0999**	**2.0999**		**1.9795**	**1.9795**	**0.0000**	**2,621.9860**	**2,621.9860**	**0.6631**		**2,635.9109**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4173	4.5211	4.2367	8.6900e-003	0.2579	0.1015	0.3595	0.0737	0.0934	0.1670		889.2729	889.2729	7.3600e-003		889.4275
Worker	0.1100	0.1310	1.6289	3.1000e-003	0.2571	1.8000e-003	0.2589	0.0682	1.6500e-003	0.0698		275.8961	275.8961	0.0134		276.1770
Total	**0.5273**	**4.6521**	**5.8656**	**0.0118**	**0.5150**	**0.1033**	**0.6184**	**0.1419**	**0.0950**	**0.2369**		**1,165.1690**	**1,165.1690**	**0.0207**		**1,165.6044**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5106	29.0589	17.8523	0.0260		1.9929	1.9929		1.8765	1.8765		2,603.2546	2,603.2546	0.6491		2,616.8846
Total	**3.5106**	**29.0589**	**17.8523**	**0.0260**		**1.9929**	**1.9929**		**1.8765**	**1.8765**		**2,603.2546**	**2,603.2546**	**0.6491**		**2,616.8846**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3599	3.9136	3.8713	8.6400e-003	0.2580	0.0791	0.3370	0.0737	0.0727	0.1464		876.4514	876.4514	6.3100e-003		876.5838
Worker	0.0980	0.1162	1.4516	3.0900e-003	0.2571	1.6800e-003	0.2588	0.0682	1.5400e-003	0.0697		264.8522	264.8522	0.0121		265.1052
Total	**0.4578**	**4.0297**	**5.3228**	**0.0117**	**0.5150**	**0.0807**	**0.5958**	**0.1419**	**0.0742**	**0.2161**		**1,141.3036**	**1,141.3036**	**0.0184**		**1,141.6890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5106	29.0589	17.8523	0.0260		1.9929	1.9929		1.8765	1.8765	0.0000	2,603.2546	2,603.2546	0.6491		2,616.8846
Total	**3.5106**	**29.0589**	**17.8523**	**0.0260**		**1.9929**	**1.9929**		**1.8765**	**1.8765**	**0.0000**	**2,603.2546**	**2,603.2546**	**0.6491**		**2,616.8846**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3599	3.9136	3.8713	8.6400e-003	0.2580	0.0791	0.3370	0.0737	0.0727	0.1464		876.4514	876.4514	6.3100e-003		876.5838
Worker	0.0980	0.1162	1.4516	3.0900e-003	0.2571	1.6800e-003	0.2588	0.0682	1.5400e-003	0.0697		264.8522	264.8522	0.0121		265.1052
Total	**0.4578**	**4.0297**	**5.3228**	**0.0117**	**0.5150**	**0.0807**	**0.5958**	**0.1419**	**0.0742**	**0.2161**		**1,141.3036**	**1,141.3036**	**0.0184**		**1,141.6890**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2693	27.6195	17.6167	0.0260		1.8525	1.8525		1.7427	1.7427		2,583.8438	2,583.8438	0.6363		2,597.2052
Total	**3.2693**	**27.6195**	**17.6167**	**0.0260**		**1.8525**	**1.8525**		**1.7427**	**1.7427**		**2,583.8438**	**2,583.8438**	**0.6363**		**2,597.2052**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3189	3.4405	3.6028	8.6300e-003	0.2580	0.0668	0.3247	0.0737	0.0614	0.1351		866.2487	866.2487	5.6400e-003		866.3671
Worker	0.0881	0.1041	1.3043	3.0900e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		255.2038	255.2038	0.0110		255.4349
Total	**0.4070**	**3.5446**	**4.9071**	**0.0117**	**0.5150**	**0.0684**	**0.5834**	**0.1419**	**0.0629**	**0.2048**		**1,121.4525**	**1,121.4525**	**0.0167**		**1,121.8020**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2693	27.6195	17.6167	0.0260		1.8525	1.8525		1.7427	1.7427	0.0000	2,583.8438	2,583.8438	0.6363		2,597.2052
Total	**3.2693**	**27.6195**	**17.6167**	**0.0260**		**1.8525**	**1.8525**		**1.7427**	**1.7427**	**0.0000**	**2,583.8438**	**2,583.8438**	**0.6363**		**2,597.2052**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3189	3.4405	3.6028	8.6300e-003	0.2580	0.0668	0.3247	0.0737	0.0614	0.1351		866.2487	866.2487	5.6400e-003		866.3671
Worker	0.0881	0.1041	1.3043	3.0900e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		255.2038	255.2038	0.0110		255.4349
Total	**0.4070**	**3.5446**	**4.9071**	**0.0117**	**0.5150**	**0.0684**	**0.5834**	**0.1419**	**0.0629**	**0.2048**		**1,121.4525**	**1,121.4525**	**0.0167**		**1,121.8020**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7369	4.7445	3.7678	5.9400e-003		0.3932	0.3932		0.3932	0.3932		562.8961	562.8961	0.0664		564.2897
Total	**12.2104**	**4.7445**	**3.7678**	**5.9400e-003**		**0.3932**	**0.3932**		**0.3932**	**0.3932**		**562.8961**	**562.8961**	**0.0664**		**564.2897**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0192	0.0226	0.2836	6.7000e-004	0.0559	3.5000e-004	0.0562	0.0148	3.2000e-004	0.0151		55.4791	55.4791	2.3900e-003		55.5293
Total	**0.0192**	**0.0226**	**0.2836**	**6.7000e-004**	**0.0559**	**3.5000e-004**	**0.0562**	**0.0148**	**3.2000e-004**	**0.0151**		**55.4791**	**55.4791**	**2.3900e-003**		**55.5293**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.4735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7369	4.7445	3.7678	5.9400e-003		0.3932	0.3932		0.3932	0.3932	0.0000	562.8961	562.8961	0.0664		564.2897
Total	**12.2104**	**4.7445**	**3.7678**	**5.9400e-003**		**0.3932**	**0.3932**		**0.3932**	**0.3932**	**0.0000**	**562.8961**	**562.8961**	**0.0664**		**564.2897**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0192	0.0226	0.2836	6.7000e-004	0.0559	3.5000e-004	0.0562	0.0148	3.2000e-004	0.0151		55.4791	55.4791	2.3900e-003		55.5293
Total	**0.0192**	**0.0226**	**0.2836**	**6.7000e-004**	**0.0559**	**3.5000e-004**	**0.0562**	**0.0148**	**3.2000e-004**	**0.0151**		**55.4791**	**55.4791**	**2.3900e-003**		**55.5293**

3.7 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1141	12.1984	8.1771	0.0125		0.6617	0.6617		0.6088	0.6088		1,298.4108	1,298.4108	0.3917		1,306.6354
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1141**	**12.1984**	**8.1771**	**0.0125**		**0.6617**	**0.6617**		**0.6088**	**0.6088**		**1,298.4108**	**1,298.4108**	**0.3917**		**1,306.6354**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0383	0.0453	0.5671	1.3400e-003	0.1118	7.0000e-004	0.1125	0.0296	6.4000e-004	0.0303		110.9582	110.9582	4.7900e-003		111.0587
Total	**0.0383**	**0.0453**	**0.5671**	**1.3400e-003**	**0.1118**	**7.0000e-004**	**0.1125**	**0.0296**	**6.4000e-004**	**0.0303**		**110.9582**	**110.9582**	**4.7900e-003**		**111.0587**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1141	12.1984	8.1771	0.0125		0.6617	0.6617		0.6088	0.6088	0.0000	1,298.4108	1,298.4108	0.3917		1,306.6354
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1141**	**12.1984**	**8.1771**	**0.0125**		**0.6617**	**0.6617**		**0.6088**	**0.6088**	**0.0000**	**1,298.4108**	**1,298.4108**	**0.3917**		**1,306.6354**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0383	0.0453	0.5671	1.3400e-003	0.1118	7.0000e-004	0.1125	0.0296	6.4000e-004	0.0303		110.9582	110.9582	4.7900e-003		111.0587
Total	**0.0383**	**0.0453**	**0.5671**	**1.3400e-003**	**0.1118**	**7.0000e-004**	**0.1125**	**0.0296**	**6.4000e-004**	**0.0303**		**110.9582**	**110.9582**	**4.7900e-003**		**111.0587**

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0173	11.0309	8.1341	0.0125		0.5970	0.5970		0.5492	0.5492		1,278.6641	1,278.6641	0.3918		1,286.8915
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0173**	**11.0309**	**8.1341**	**0.0125**		**0.5970**	**0.5970**		**0.5492**	**0.5492**		**1,278.6641**	**1,278.6641**	**0.3918**		**1,286.8915**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0343	0.0406	0.5093	1.3400e-003	0.1118	6.8000e-004	0.1125	0.0296	6.3000e-004	0.0303		106.5656	106.5656	4.3900e-003		106.6578
Total	**0.0343**	**0.0406**	**0.5093**	**1.3400e-003**	**0.1118**	**6.8000e-004**	**0.1125**	**0.0296**	**6.3000e-004**	**0.0303**		**106.5656**	**106.5656**	**4.3900e-003**		**106.6578**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0173	11.0309	8.1341	0.0125		0.5970	0.5970		0.5492	0.5492	0.0000	1,278.6641	1,278.6641	0.3918		1,286.8915
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0173**	**11.0309**	**8.1341**	**0.0125**		**0.5970**	**0.5970**		**0.5492**	**0.5492**	**0.0000**	**1,278.6641**	**1,278.6641**	**0.3918**		**1,286.8915**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0343	0.0406	0.5093	1.3400e-003	0.1118	6.8000e-004	0.1125	0.0296	6.3000e-004	0.0303		106.5656	106.5656	4.3900e-003		106.6578
Total	**0.0343**	**0.0406**	**0.5093**	**1.3400e-003**	**0.1118**	**6.8000e-004**	**0.1125**	**0.0296**	**6.3000e-004**	**0.0303**		**106.5656**	**106.5656**	**4.3900e-003**		**106.6578**

RCH Expansion Project Phase I Construction

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	189.00	Bed	3.11	251,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Land Use - Phase I hospital bed tower 251,500 sq ft

Demolition - Demo Bldg N 61,135 sq ft

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	18.00	127.00
tblConstructionPhase	NumDays	230.00	561.00
tblConstructionPhase	NumDays	20.00	72.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	18.00	70.00

tblConstructionPhase	PhaseEndDate	6/21/2017	12/20/2016
tblConstructionPhase	PhaseEndDate	3/28/2017	3/13/2017
tblConstructionPhase	PhaseStartDate	12/27/2016	6/27/2016
tblConstructionPhase	PhaseStartDate	11/1/2014	11/3/2014
tblConstructionPhase	PhaseStartDate	12/21/2016	12/6/2016
tblGrading	AcresOfGrading	4.50	4.00
tblGrading	MaterialExported	0.00	17,740.00
tblLandUse	LandUseSquareFeet	135,278.18	251,500.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	80.00	23.00
tblTripsAndVMT	WorkerTripNumber	16.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.2591	2.7912	1.9586	3.0500e-003	0.0932	0.1342	0.2274	0.0269	0.1246	0.1515	0.0000	284.6394	284.6394	0.0495	0.0000	285.6789
2015	0.5192	4.3432	3.0839	4.8900e-003	0.0662	0.2707	0.3368	0.0183	0.2546	0.2729	0.0000	440.6260	440.6260	0.0790	0.0000	442.2855
2016	1.2608	4.4453	3.2921	5.3600e-003	0.0697	0.2781	0.3479	0.0192	0.2628	0.2820	0.0000	476.8415	476.8415	0.0835	0.0000	478.5950
2017	0.0267	0.2824	0.2190	3.5000e-004	2.8000e-003	0.0152	0.0180	7.4000e-004	0.0140	0.0148	0.0000	31.8629	31.8629	9.1600e-003	0.0000	32.0554
Total	**2.0658**	**11.8622**	**8.5536**	**0.0137**	**0.2319**	**0.6982**	**0.9301**	**0.0651**	**0.6560**	**0.7211**	**0.0000**	**1,233.9698**	**1,233.9698**	**0.2212**	**0.0000**	**1,238.6148**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.2591	2.7912	1.9586	3.0500e-003	0.0603	0.1342	0.1945	0.0171	0.1246	0.1416	0.0000	284.6392	284.6392	0.0495	0.0000	285.6787
2015	0.5192	4.3432	3.0839	4.8900e-003	0.0662	0.2707	0.3368	0.0183	0.2546	0.2729	0.0000	440.6257	440.6257	0.0790	0.0000	442.2851
2016	1.2608	4.4453	3.2921	5.3600e-003	0.0697	0.2781	0.3479	0.0192	0.2628	0.2820	0.0000	476.8411	476.8411	0.0835	0.0000	478.5946
2017	0.0267	0.2824	0.2190	3.5000e-004	2.8000e-003	0.0152	0.0180	7.4000e-004	0.0140	0.0148	0.0000	31.8629	31.8629	9.1600e-003	0.0000	32.0553
Total	**2.0658**	**11.8622**	**8.5536**	**0.0137**	**0.1990**	**0.6982**	**0.8973**	**0.0552**	**0.6560**	**0.7113**	**0.0000**	**1,233.9688**	**1,233.9688**	**0.2212**	**0.0000**	**1,238.6137**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**14.17**	**0.00**	**3.53**	**15.14**	**0.00**	**1.37**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/26/2014	10/3/2014	5	72	
2	Grading	Grading	10/4/2014	10/16/2014	5	9	
3	Trenching	Trenching	10/17/2014	10/31/2014	5	11	
4	Building Construction	Building Construction	11/3/2014	12/26/2016	5	561	
5	Architectural Coating	Architectural Coating	6/27/2016	12/20/2016	5	127	
6	Paving	Paving	12/6/2016	3/13/2017	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 377,250; Non-Residential Outdoor: 125,750 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	2	4.00	226	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	1	6.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	2,218.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	41.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0303	0.0000	0.0303	4.5800e-003	0.0000	4.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1195	1.3610	0.9861	1.1000e-003		0.0646	0.0646		0.0595	0.0595	0.0000	105.0483	105.0483	0.0303	0.0000	105.6851
Total	**0.1195**	**1.3610**	**0.9861**	**1.1000e-003**	**0.0303**	**0.0646**	**0.0948**	**4.5800e-003**	**0.0595**	**0.0641**	**0.0000**	**105.0483**	**105.0483**	**0.0303**	**0.0000**	**105.6851**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7900e-003	0.0507	0.0299	1.0000e-004	2.3900e-003	1.0500e-003	3.4400e-003	6.6000e-004	9.6000e-004	1.6200e-003	0.0000	9.2869	9.2869	7.0000e-005	0.0000	9.2884
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3300e-003	3.4200e-003	0.0344	7.0000e-005	5.9400e-003	4.0000e-005	5.9800e-003	1.5800e-003	4.0000e-005	1.6100e-003	0.0000	5.4442	5.4442	2.8000e-004	0.0000	5.4502
Total	**5.1200e-003**	**0.0541**	**0.0643**	**1.7000e-004**	**8.3300e-003**	**1.0900e-003**	**9.4200e-003**	**2.2400e-003**	**1.0000e-003**	**3.2300e-003**	**0.0000**	**14.7311**	**14.7311**	**3.5000e-004**	**0.0000**	**14.7386**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0118	0.0000	0.0118	1.7900e-003	0.0000	1.7900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1195	1.3610	0.9861	1.1000e-003		0.0646	0.0646		0.0595	0.0595	0.0000	105.0481	105.0481	0.0303	0.0000	105.6849
Total	**0.1195**	**1.3610**	**0.9861**	**1.1000e-003**	**0.0118**	**0.0646**	**0.0764**	**1.7900e-003**	**0.0595**	**0.0613**	**0.0000**	**105.0481**	**105.0481**	**0.0303**	**0.0000**	**105.6849**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7900e-003	0.0507	0.0299	1.0000e-004	2.3900e-003	1.0500e-003	3.4400e-003	6.6000e-004	9.6000e-004	1.6200e-003	0.0000	9.2869	9.2869	7.0000e-005	0.0000	9.2884
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3300e-003	3.4200e-003	0.0344	7.0000e-005	5.9400e-003	4.0000e-005	5.9800e-003	1.5800e-003	4.0000e-005	1.6100e-003	0.0000	5.4442	5.4442	2.8000e-004	0.0000	5.4502
Total	**5.1200e-003**	**0.0541**	**0.0643**	**1.7000e-004**	**8.3300e-003**	**1.0900e-003**	**9.4200e-003**	**2.2400e-003**	**1.0000e-003**	**3.2300e-003**	**0.0000**	**14.7311**	**14.7311**	**3.5000e-004**	**0.0000**	**14.7386**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0236	0.0000	0.0236	0.0116	0.0000	0.0116	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.1686	0.1079	1.2000e-004		9.9100e-003	9.9100e-003		9.1200e-003	9.1200e-003	0.0000	11.9468	11.9468	3.5300e-003	0.0000	12.0209
Total	**0.0160**	**0.1686**	**0.1079**	**1.2000e-004**	**0.0236**	**9.9100e-003**	**0.0335**	**0.0116**	**9.1200e-003**	**0.0207**	**0.0000**	**11.9468**	**11.9468**	**3.5300e-003**	**0.0000**	**12.0209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0223	0.4046	0.2386	7.9000e-004	0.0191	8.3500e-003	0.0274	5.2300e-003	7.6800e-003	0.0129	0.0000	74.0946	74.0946	5.9000e-004	0.0000	74.1069
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	4.3000e-004	4.2900e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6805	0.6805	4.0000e-005	0.0000	0.6813
Total	**0.0226**	**0.4050**	**0.2429**	**8.0000e-004**	**0.0198**	**8.3600e-003**	**0.0282**	**5.4300e-003**	**7.6800e-003**	**0.0131**	**0.0000**	**74.7752**	**74.7752**	**6.3000e-004**	**0.0000**	**74.7882**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.1900e-003	0.0000	9.1900e-003	4.5100e-003	0.0000	4.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.1686	0.1079	1.2000e-004		9.9100e-003	9.9100e-003		9.1200e-003	9.1200e-003	0.0000	11.9468	11.9468	3.5300e-003	0.0000	12.0209
Total	**0.0160**	**0.1686**	**0.1079**	**1.2000e-004**	**9.1900e-003**	**9.9100e-003**	**0.0191**	**4.5100e-003**	**9.1200e-003**	**0.0136**	**0.0000**	**11.9468**	**11.9468**	**3.5300e-003**	**0.0000**	**12.0209**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0223	0.4046	0.2386	7.9000e-004	0.0191	8.3500e-003	0.0274	5.2300e-003	7.6800e-003	0.0129	0.0000	74.0946	74.0946	5.9000e-004	0.0000	74.1069
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	4.3000e-004	4.2900e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6805	0.6805	4.0000e-005	0.0000	0.6813
Total	**0.0226**	**0.4050**	**0.2429**	**8.0000e-004**	**0.0198**	**8.3600e-003**	**0.0282**	**5.4300e-003**	**7.6800e-003**	**0.0131**	**0.0000**	**74.7752**	**74.7752**	**6.3000e-004**	**0.0000**	**74.7882**

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.3600e-003	0.0472	0.0322	5.0000e-005		2.8900e-003	2.8900e-003		2.6600e-003	2.6600e-003	0.0000	4.4521	4.4521	1.3200e-003	0.0000	4.4797
Total	**4.3600e-003**	**0.0472**	**0.0322**	**5.0000e-005**		**2.8900e-003**	**2.8900e-003**		**2.6600e-003**	**2.6600e-003**	**0.0000**	**4.4521**	**4.4521**	**1.3200e-003**	**0.0000**	**4.4797**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.7000e-004	1.7500e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2773	0.2773	1.0000e-005	0.0000	0.2776
Total	**1.2000e-004**	**1.7000e-004**	**1.7500e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2773**	**0.2773**	**1.0000e-005**	**0.0000**	**0.2776**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.3600e-003	0.0472	0.0322	5.0000e-005		2.8900e-003	2.8900e-003		2.6600e-003	2.6600e-003	0.0000	4.4521	4.4521	1.3200e-003	0.0000	4.4797
Total	**4.3600e-003**	**0.0472**	**0.0322**	**5.0000e-005**		**2.8900e-003**	**2.8900e-003**		**2.6600e-003**	**2.6600e-003**	**0.0000**	**4.4521**	**4.4521**	**1.3200e-003**	**0.0000**	**4.4797**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.7000e-004	1.7500e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2773	0.2773	1.0000e-005	0.0000	0.2776
Total	**1.2000e-004**	**1.7000e-004**	**1.7500e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2773**	**0.2773**	**1.0000e-005**	**0.0000**	**0.2776**

3.5 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0799	0.6502	0.3879	5.6000e-004		0.0452	0.0452		0.0426	0.0426	0.0000	51.1405	51.1405	0.0129	0.0000	51.4121
Total	**0.0799**	**0.6502**	**0.3879**	**5.6000e-004**		**0.0452**	**0.0452**		**0.0426**	**0.0426**	**0.0000**	**51.1405**	**51.1405**	**0.0129**	**0.0000**	**51.4121**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4600e-003	0.1018	0.1041	1.9000e-004	5.4700e-003	2.1900e-003	7.6600e-003	1.5700e-003	2.0200e-003	3.5800e-003	0.0000	17.2828	17.2828	1.5000e-004	0.0000	17.2859
Worker	2.1400e-003	3.1300e-003	0.0315	6.0000e-005	5.4400e-003	4.0000e-005	5.4700e-003	1.4400e-003	4.0000e-005	1.4800e-003	0.0000	4.9855	4.9855	2.6000e-004	0.0000	4.9910
Total	**0.0116**	**0.1049**	**0.1356**	**2.5000e-004**	**0.0109**	**2.2300e-003**	**0.0131**	**3.0100e-003**	**2.0600e-003**	**5.0600e-003**	**0.0000**	**22.2683**	**22.2683**	**4.1000e-004**	**0.0000**	**22.2768**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0799	0.6502	0.3879	5.6000e-004		0.0452	0.0452		0.0426	0.0426	0.0000	51.1404	51.1404	0.0129	0.0000	51.4120
Total	**0.0799**	**0.6502**	**0.3879**	**5.6000e-004**		**0.0452**	**0.0452**		**0.0426**	**0.0426**	**0.0000**	**51.1404**	**51.1404**	**0.0129**	**0.0000**	**51.4120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4600e-003	0.1018	0.1041	1.9000e-004	5.4700e-003	2.1900e-003	7.6600e-003	1.5700e-003	2.0200e-003	3.5800e-003	0.0000	17.2828	17.2828	1.5000e-004	0.0000	17.2859
Worker	2.1400e-003	3.1300e-003	0.0315	6.0000e-005	5.4400e-003	4.0000e-005	5.4700e-003	1.4400e-003	4.0000e-005	1.4800e-003	0.0000	4.9855	4.9855	2.6000e-004	0.0000	4.9910
Total	**0.0116**	**0.1049**	**0.1356**	**2.5000e-004**	**0.0109**	**2.2300e-003**	**0.0131**	**3.0100e-003**	**2.0600e-003**	**5.0600e-003**	**0.0000**	**22.2683**	**22.2683**	**4.1000e-004**	**0.0000**	**22.2768**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4581	3.7922	2.3297	3.3900e-003		0.2601	0.2601		0.2449	0.2449	0.0000	308.1931	308.1931	0.0768	0.0000	309.8067
Total	**0.4581**	**3.7922**	**2.3297**	**3.3900e-003**		**0.2601**	**0.2601**		**0.2449**	**0.2449**	**0.0000**	**308.1931**	**308.1931**	**0.0768**	**0.0000**	**309.8067**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0495	0.5342	0.5845	1.1300e-003	0.0332	0.0104	0.0436	9.5000e-003	9.5300e-003	0.0190	0.0000	103.3858	103.3858	7.6000e-004	0.0000	103.4017
Worker	0.0115	0.0168	0.1697	3.7000e-004	0.0330	2.2000e-004	0.0332	8.7600e-003	2.0000e-004	8.9600e-003	0.0000	29.0472	29.0472	1.4300e-003	0.0000	29.0771
Total	**0.0611**	**0.5510**	**0.7542**	**1.5000e-003**	**0.0662**	**0.0106**	**0.0768**	**0.0183**	**9.7300e-003**	**0.0280**	**0.0000**	**132.4330**	**132.4330**	**2.1900e-003**	**0.0000**	**132.4788**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4581	3.7922	2.3297	3.3900e-003		0.2601	0.2601		0.2449	0.2449	0.0000	308.1927	308.1927	0.0768	0.0000	309.8063
Total	**0.4581**	**3.7922**	**2.3297**	**3.3900e-003**		**0.2601**	**0.2601**		**0.2449**	**0.2449**	**0.0000**	**308.1927**	**308.1927**	**0.0768**	**0.0000**	**309.8063**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0495	0.5342	0.5845	1.1300e-003	0.0332	0.0104	0.0436	9.5000e-003	9.5300e-003	0.0190	0.0000	103.3858	103.3858	7.6000e-004	0.0000	103.4017
Worker	0.0115	0.0168	0.1697	3.7000e-004	0.0330	2.2000e-004	0.0332	8.7600e-003	2.0000e-004	8.9600e-003	0.0000	29.0472	29.0472	1.4300e-003	0.0000	29.0771
Total	**0.0611**	**0.5510**	**0.7542**	**1.5000e-003**	**0.0662**	**0.0106**	**0.0768**	**0.0183**	**9.7300e-003**	**0.0280**	**0.0000**	**132.4330**	**132.4330**	**2.1900e-003**	**0.0000**	**132.4788**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4201	3.5491	2.2638	3.3400e-003		0.2380	0.2380		0.2239	0.2239	0.0000	301.2070	301.2070	0.0742	0.0000	302.7646
Total	**0.4201**	**3.5491**	**2.2638**	**3.3400e-003**		**0.2380**	**0.2380**		**0.2239**	**0.2239**	**0.0000**	**301.2070**	**301.2070**	**0.0742**	**0.0000**	**302.7646**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0432	0.4621	0.5408	1.1100e-003	0.0327	8.6100e-003	0.0413	9.3500e-003	7.9200e-003	0.0173	0.0000	100.6144	100.6144	6.7000e-004	0.0000	100.6284
Worker	0.0102	0.0149	0.1497	3.7000e-004	0.0325	2.1000e-004	0.0327	8.6300e-003	1.9000e-004	8.8200e-003	0.0000	27.5576	27.5576	1.2800e-003	0.0000	27.5845
Total	**0.0534**	**0.4769**	**0.6905**	**1.4800e-003**	**0.0652**	**8.8200e-003**	**0.0740**	**0.0180**	**8.1100e-003**	**0.0261**	**0.0000**	**128.1719**	**128.1719**	**1.9500e-003**	**0.0000**	**128.2129**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4201	3.5491	2.2638	3.3400e-003		0.2380	0.2380		0.2239	0.2239	0.0000	301.2067	301.2067	0.0742	0.0000	302.7643
Total	**0.4201**	**3.5491**	**2.2638**	**3.3400e-003**		**0.2380**	**0.2380**		**0.2239**	**0.2239**	**0.0000**	**301.2067**	**301.2067**	**0.0742**	**0.0000**	**302.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0432	0.4621	0.5408	1.1100e-003	0.0327	8.6100e-003	0.0413	9.3500e-003	7.9200e-003	0.0173	0.0000	100.6144	100.6144	6.7000e-004	0.0000	100.6284
Worker	0.0102	0.0149	0.1497	3.7000e-004	0.0325	2.1000e-004	0.0327	8.6300e-003	1.9000e-004	8.8200e-003	0.0000	27.5576	27.5576	1.2800e-003	0.0000	27.5845
Total	**0.0534**	**0.4769**	**0.6905**	**1.4800e-003**	**0.0652**	**8.8200e-003**	**0.0740**	**0.0180**	**8.1100e-003**	**0.0261**	**0.0000**	**128.1719**	**128.1719**	**1.9500e-003**	**0.0000**	**128.2129**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7286					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0468	0.3013	0.2393	3.8000e-004		0.0250	0.0250		0.0250	0.0250	0.0000	32.4263	32.4263	3.8200e-003	0.0000	32.5066
Total	**0.7754**	**0.3013**	**0.2393**	**3.8000e-004**		**0.0250**	**0.0250**		**0.0250**	**0.0250**	**0.0000**	**32.4263**	**32.4263**	**3.8200e-003**	**0.0000**	**32.5066**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	1.6000e-003	0.0161	4.0000e-005	3.4900e-003	2.0000e-005	3.5100e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	2.9604	2.9604	1.4000e-004	0.0000	2.9633
Total	**1.0900e-003**	**1.6000e-003**	**0.0161**	**4.0000e-005**	**3.4900e-003**	**2.0000e-005**	**3.5100e-003**	**9.3000e-004**	**2.0000e-005**	**9.5000e-004**	**0.0000**	**2.9604**	**2.9604**	**1.4000e-004**	**0.0000**	**2.9633**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7286					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0468	0.3013	0.2393	3.8000e-004		0.0250	0.0250		0.0250	0.0250	0.0000	32.4263	32.4263	3.8200e-003	0.0000	32.5066
Total	**0.7754**	**0.3013**	**0.2393**	**3.8000e-004**		**0.0250**	**0.0250**		**0.0250**	**0.0250**	**0.0000**	**32.4263**	**32.4263**	**3.8200e-003**	**0.0000**	**32.5066**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	1.6000e-003	0.0161	4.0000e-005	3.4900e-003	2.0000e-005	3.5100e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	2.9604	2.9604	1.4000e-004	0.0000	2.9633
Total	**1.0900e-003**	**1.6000e-003**	**0.0161**	**4.0000e-005**	**3.4900e-003**	**2.0000e-005**	**3.5100e-003**	**9.3000e-004**	**2.0000e-005**	**9.5000e-004**	**0.0000**	**2.9604**	**2.9604**	**1.4000e-004**	**0.0000**	**2.9633**

3.7 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0106	0.1159	0.0777	1.2000e-004		6.2900e-003	6.2900e-003		5.7800e-003	5.7800e-003	0.0000	11.1900	11.1900	3.3800e-003	0.0000	11.2609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0106**	**0.1159**	**0.0777**	**1.2000e-004**		**6.2900e-003**	**6.2900e-003**		**5.7800e-003**	**5.7800e-003**	**0.0000**	**11.1900**	**11.1900**	**3.3800e-003**	**0.0000**	**11.2609**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	4.8000e-004	4.8100e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8858	0.8858	4.0000e-005	0.0000	0.8867
Total	**3.3000e-004**	**4.8000e-004**	**4.8100e-003**	**1.0000e-005**	**1.0400e-003**	**1.0000e-005**	**1.0500e-003**	**2.8000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8858**	**0.8858**	**4.0000e-005**	**0.0000**	**0.8867**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0106	0.1159	0.0777	1.2000e-004		6.2900e-003	6.2900e-003		5.7800e-003	5.7800e-003	0.0000	11.1900	11.1900	3.3800e-003	0.0000	11.2609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0106**	**0.1159**	**0.0777**	**1.2000e-004**		**6.2900e-003**	**6.2900e-003**		**5.7800e-003**	**5.7800e-003**	**0.0000**	**11.1900**	**11.1900**	**3.3800e-003**	**0.0000**	**11.2609**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	4.8000e-004	4.8100e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8858	0.8858	4.0000e-005	0.0000	0.8867
Total	**3.3000e-004**	**4.8000e-004**	**4.8100e-003**	**1.0000e-005**	**1.0400e-003**	**1.0000e-005**	**1.0500e-003**	**2.8000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8858**	**0.8858**	**4.0000e-005**	**0.0000**	**0.8867**

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0259	0.2813	0.2074	3.2000e-004		0.0152	0.0152		0.0140	0.0140	0.0000	29.5796	29.5796	9.0600e-003	0.0000	29.7699
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0259**	**0.2813**	**0.2074**	**3.2000e-004**		**0.0152**	**0.0152**		**0.0140**	**0.0140**	**0.0000**	**29.5796**	**29.5796**	**9.0600e-003**	**0.0000**	**29.7699**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	1.1500e-003	0.0116	3.0000e-005	2.8000e-003	2.0000e-005	2.8200e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.2833	2.2833	1.0000e-004	0.0000	2.2854

Total	**7.8000e-004**	**1.1500e-003**	**0.0116**	**3.0000e-005**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.2833**	**2.2833**	**1.0000e-004**	**0.0000**	**2.2854**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0259	0.2813	0.2074	3.2000e-004		0.0152	0.0152		0.0140	0.0140	0.0000	29.5796	29.5796	9.0600e-003	0.0000	29.7699
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0259**	**0.2813**	**0.2074**	**3.2000e-004**		**0.0152**	**0.0152**		**0.0140**	**0.0140**	**0.0000**	**29.5796**	**29.5796**	**9.0600e-003**	**0.0000**	**29.7699**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	1.1500e-003	0.0116	3.0000e-005	2.8000e-003	2.0000e-005	2.8200e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.2833	2.2833	1.0000e-004	0.0000	2.2854
Total	**7.8000e-004**	**1.1500e-003**	**0.0116**	**3.0000e-005**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.2833**	**2.2833**	**1.0000e-004**	**0.0000**	**2.2854**

RCH Expansion Project Phase I Operations

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	562.00	Bed	9.23	580,421.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	184.26	1000sqft	4.23	184,257.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365

tblLandUse	LandUseSquareFeet	402,255.76	580,421.00
tblLandUse	LandUseSquareFeet	184,260.00	184,257.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	22.1546	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Energy	2.9199	26.5447	22.2975	0.1593		2.0174	2.0174		2.0174	2.0174		31,853.6295	31,853.6295	0.6105	0.5840	32,047.4853
Mobile	58.0255	199.0331	627.8386	1.6834	122.5187	2.8365	125.3552	32.6975	2.6107	35.3081		143,372.4612	143,372.4612	4.7291		143,471.7715
Total	**83.1001**	**225.5786**	**650.2223**	**1.8427**	**122.5187**	**4.8542**	**127.3729**	**32.6975**	**4.6284**	**37.3259**		**175,226.2720**	**175,226.2720**	**5.3401**	**0.5840**	**175,519.4487**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	22.1546	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Energy	2.9199	26.5447	22.2975	0.1593		2.0174	2.0174		2.0174	2.0174		31,853.6295	31,853.6295	0.6105	0.5840	32,047.4853
Mobile	53.1358	152.5545	508.7493	1.2465	89.8468	2.1171	91.9639	23.9781	1.9485	25.9266		106,131.8913	106,131.8913	3.5826		106,207.1254
Total	**78.2104**	**179.1000**	**531.1331**	**1.4058**	**89.8468**	**4.1348**	**93.9816**	**23.9781**	**3.9662**	**27.9443**		**137,985.7021**	**137,985.7021**	**4.1936**	**0.5840**	**138,254.8027**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.88**	**20.60**	**18.32**	**23.71**	**26.67**	**14.82**	**26.22**	**26.67**	**14.31**	**25.13**	**0.00**	**21.25**	**21.25**	**21.47**	**0.00**	**21.23**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Ride Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	53.1358	152.5545	508.7493	1.2465	89.8468	2.1171	91.9639	23.9781	1.9485	25.9266		106,131.8913	106,131.8913	3.5826		106,207.1254
Unmitigated	58.0255	199.0331	627.8386	1.6834	122.5187	2.8365	125.3552	32.6975	2.6107	35.3081		143,372.4612	143,372.4612	4.7291		143,471.7715

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	5,091.72	3,506.88	3102.24	17,760,211	13,004,593
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	5,198.50	3,209.02	2810.00	17,729,085	12,981,802
Medical Office Building	4,659.94	1,155.31	199.00	9,135,565	6,737,414
Total	16,455.97	8,853.98	6,976.41	49,818,170	36,526,515

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH

0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.003242

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.9199	26.5447	22.2975	0.1593		2.0174	2.0174		2.0174	2.0174		31,853.6295	31,853.6295	0.6105	0.5840	32,047.4853
NaturalGas Unmitigated	2.9199	26.5447	22.2975	0.1593		2.0174	2.0174		2.0174	2.0174		31,853.6295	31,853.6295	0.6105	0.5840	32,047.4853

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	235540	2.5401	23.0921	19.3974	0.1386		1.7550	1.7550		1.7550	1.7550		27,710.5426	27,710.5426	0.5311	0.5080	27,879.1844
Hospital	33373.7	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	1842.57	0.0199	0.1806	0.1517	1.0800e-003		0.0137	0.0137		0.0137	0.0137		216.7729	216.7729	4.1500e-003	3.9700e-003	218.0922
Total		**2.9199**	**26.5447**	**22.2975**	**0.1593**		**2.0174**	**2.0174**		**2.0174**	**2.0174**		**31,853.6295**	**31,853.6295**	**0.6105**	**0.5840**	**32,047.4853**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	33.3737	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	1.84257	0.0199	0.1806	0.1517	1.0800e-003		0.0137	0.0137		0.0137	0.0137		216.7729	216.7729	4.1500e-003	3.9700e-003	218.0922
Hospital	235.54	2.5401	23.0921	19.3974	0.1386		1.7550	1.7550		1.7550	1.7550		27,710.5426	27,710.5426	0.5311	0.5080	27,879.1844
Total		**2.9199**	**26.5447**	**22.2975**	**0.1593**		**2.0174**	**2.0174**		**2.0174**	**2.0174**		**31,853.6295**	**31,853.6295**	**0.6105**	**0.5840**	**32,047.4853**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	22.1546	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Unmitigated	22.1546	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.3774					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.7690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.3200e-003	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Total	**22.1547**	**8.2000e-004**	**0.0862**	**1.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**0.1813**	**0.1813**	**5.0000e-004**		**0.1919**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.3774					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.7690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.3200e-003	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Total	**22.1547**	**8.2000e-004**	**0.0862**	**1.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**0.1813**	**0.1813**	**5.0000e-004**		**0.1919**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Expansion Project Phase I Operations

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	562.00	Bed	9.23	580,421.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	184.26	1000sqft	4.23	184,257.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365

tblLandUse	LandUseSquareFeet	402,255.76	580,421.00
tblLandUse	LandUseSquareFeet	184,260.00	184,257.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	22.1546	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Energy	2.9199	26.5447	22.2975	0.1593		2.0174	2.0174		2.0174	2.0174		31,853.6295	31,853.6295	0.6105	0.5840	32,047.4853
Mobile	59.5096	190.9255	674.3580	1.8050	122.5187	2.8265	125.3451	32.6975	2.6014	35.2989		153,145.8485	153,145.8485	4.7233		153,245.0380
Total	**84.5842**	**217.4711**	**696.7417**	**1.9643**	**122.5187**	**4.8442**	**127.3628**	**32.6975**	**4.6191**	**37.3166**		**184,999.6592**	**184,999.6592**	**5.3343**	**0.5840**	**185,292.7153**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	22.1546	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Energy	2.9199	26.5447	22.2975	0.1593		2.0174	2.0174		2.0174	2.0174		31,853.6295	31,853.6295	0.6105	0.5840	32,047.4853
Mobile	54.3832	146.6349	534.0853	1.3360	89.8468	2.1071	91.9539	23.9781	1.9393	25.9174		113,344.2131	113,344.2131	3.5768		113,419.3264
Total	**79.4578**	**173.1804**	**556.4690**	**1.4953**	**89.8468**	**4.1248**	**93.9716**	**23.9781**	**3.9570**	**27.9351**		**145,198.0239**	**145,198.0239**	**4.1879**	**0.5840**	**145,467.0037**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.06**	**20.37**	**20.13**	**23.88**	**26.67**	**14.85**	**26.22**	**26.67**	**14.34**	**25.14**	**0.00**	**21.51**	**21.51**	**21.49**	**0.00**	**21.49**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	54.3832	146.6349	534.0853	1.3360	89.8468	2.1071	91.9539	23.9781	1.9393	25.9174		113,344.2131	113,344.2131	3.5768		113,419.3264
Unmitigated	59.5096	190.9255	674.3580	1.8050	122.5187	2.8265	125.3451	32.6975	2.6014	35.2989		153,145.8485	153,145.8485	4.7233		153,245.0380

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	5,091.72	3,506.88	3102.24	17,760,211	13,004,593
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	5,198.50	3,209.02	2810.00	17,729,085	12,981,802
Medical Office Building	4,659.94	1,155.31	199.00	9,135,565	6,737,414
Total	16,455.97	8,853.98	6,976.41	49,818,170	36,526,515

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.003242

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.9199	26.5447	22.2975	0.1593		2.0174	2.0174		2.0174	2.0174		31,853.6295	31,853.6295	0.6105	0.5840	32,047.4853
NaturalGas Unmitigated	2.9199	26.5447	22.2975	0.1593		2.0174	2.0174		2.0174	2.0174		31,853.6295	31,853.6295	0.6105	0.5840	32,047.4853

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	235540	2.5401	23.0921	19.3974	0.1386		1.7550	1.7550		1.7550	1.7550		27,710.5426	27,710.5426	0.5311	0.5080	27,879.1844
Hospital	33373.7	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	1842.57	0.0199	0.1806	0.1517	1.0800e-003		0.0137	0.0137		0.0137	0.0137		216.7729	216.7729	4.1500e-003	3.9700e-003	218.0922
Total		**2.9199**	**26.5447**	**22.2975**	**0.1593**		**2.0174**	**2.0174**		**2.0174**	**2.0174**		**31,853.6295**	**31,853.6295**	**0.6105**	**0.5840**	**32,047.4853**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	33.3737	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	1.84257	0.0199	0.1806	0.1517	1.0800e-003		0.0137	0.0137		0.0137	0.0137		216.7729	216.7729	4.1500e-003	3.9700e-003	218.0922
Hospital	235.54	2.5401	23.0921	19.3974	0.1386		1.7550	1.7550		1.7550	1.7550		27,710.5426	27,710.5426	0.5311	0.5080	27,879.1844
Total		**2.9199**	**26.5447**	**22.2975**	**0.1593**		**2.0174**	**2.0174**		**2.0174**	**2.0174**		**31,853.6295**	**31,853.6295**	**0.6105**	**0.5840**	**32,047.4853**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	22.1546	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Unmitigated	22.1546	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.3774					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.7690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.3200e-003	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Total	**22.1547**	**8.2000e-004**	**0.0862**	**1.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**0.1813**	**0.1813**	**5.0000e-004**		**0.1919**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.3774					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.7690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.3200e-003	8.2000e-004	0.0862	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1813	0.1813	5.0000e-004		0.1919
Total	**22.1547**	**8.2000e-004**	**0.0862**	**1.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**0.1813**	**0.1813**	**5.0000e-004**		**0.1919**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Expansion Project Phase I Operations

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	562.00	Bed	9.23	580,421.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	184.26	1000sqft	4.23	184,257.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365

tblLandUse	LandUseSquareFeet	402,255.76	580,421.00
tblLandUse	LandUseSquareFeet	184,260.00	184,257.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.0432	1.5000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0300	0.0300	8.0000e-005	0.0000	0.0318
Energy	0.5329	4.8444	4.0693	0.0291		0.3682	0.3682		0.3682	0.3682	0.0000	18,902.0629	18,902.0629	0.3992	0.1584	18,959.5405
Mobile	8.6422	31.8455	101.2564	0.2665	18.8972	0.4431	19.3403	5.0500	0.4079	5.4578	0.0000	20,577.2093	20,577.2093	0.6708	0.0000	20,591.2959
Waste						0.0000	0.0000		0.0000	0.0000	917.3649	0.0000	917.3649	54.2147	0.0000	2,055.8738
Water						0.0000	0.0000		0.0000	0.0000	29.6896	763.8073	793.4968	0.1189	0.0680	817.0806
Total	**13.2183**	**36.6900**	**105.3415**	**0.2956**	**18.8972**	**0.8114**	**19.7085**	**5.0500**	**0.7761**	**5.8261**	**947.0544**	**40,243.1095**	**41,190.1639**	**55.4037**	**0.2264**	**42,423.8225**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.0432	1.5000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0300	0.0300	8.0000e-005	0.0000	0.0318
Energy	0.5329	4.8444	4.0693	0.0291		0.3682	0.3682		0.3682	0.3682	0.0000	18,902.0629	18,902.0629	0.3992	0.1584	18,959.5405
Mobile	7.8642	24.3952	81.9469	0.1973	13.8553	0.3304	14.1857	3.7026	0.3041	4.0067	0.0000	15,230.2722	15,230.2722	0.5078	0.0000	15,240.9360
Waste						0.0000	0.0000		0.0000	0.0000	917.3649	0.0000	917.3649	54.2147	0.0000	2,055.8738
Water						0.0000	0.0000		0.0000	0.0000	29.6896	763.8073	793.4968	0.1183	0.0679	817.0332
Total	**12.4403**	**29.2397**	**86.0319**	**0.2264**	**13.8553**	**0.6986**	**14.5540**	**3.7026**	**0.6723**	**4.3750**	**947.0544**	**34,896.1724**	**35,843.2268**	**55.2401**	**0.2263**	**37,073.4152**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.89**	**20.31**	**18.33**	**23.41**	**26.68**	**13.90**	**26.15**	**26.68**	**13.37**	**24.91**	**0.00**	**13.29**	**12.98**	**0.30**	**0.05**	**12.61**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.8642	24.3952	81.9469	0.1973	13.8553	0.3304	14.1857	3.7026	0.3041	4.0067	0.0000	15,230.2722	15,230.2722	0.5078	0.0000	15,240.9360
Unmitigated	8.6422	31.8455	101.2564	0.2665	18.8972	0.4431	19.3403	5.0500	0.4079	5.4578	0.0000	20,577.2093	20,577.2093	0.6708	0.0000	20,591.2959

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	5,091.72	3,506.88	3102.24	17,760,211	13,004,593
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	5,198.50	3,209.02	2810.00	17,729,085	12,981,802
Medical Office Building	4,659.94	1,155.31	199.00	9,135,565	6,737,414
Total	16,455.97	8,853.98	6,976.41	49,818,170	36,526,515

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.003242

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13,628.3373	13,628.3373	0.2981	0.0617	13,653.7199
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13,628.3373	13,628.3373	0.2981	0.0617	13,653.7199
NaturalGas Mitigated	0.5329	4.8444	4.0693	0.0291		0.3682	0.3682		0.3682	0.3682	0.0000	5,273.7256	5,273.7256	0.1011	0.0967	5,305.8206
NaturalGas Unmitigated	0.5329	4.8444	4.0693	0.0291		0.3682	0.3682		0.3682	0.3682	0.0000	5,273.7256	5,273.7256	0.1011	0.0967	5,305.8206

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	1.21814e+007	0.0657	0.5971	0.5016	3.5800e-003		0.0454	0.0454		0.0454	0.0454	0.0000	650.0453	650.0453	0.0125	0.0119	654.0014
Hospital	8.5972e+007	0.4636	4.2143	3.5400	0.0253		0.3203	0.3203		0.3203	0.3203	0.0000	4,587.7911	4,587.7911	0.0879	0.0841	4,615.7116
Medical Office Building	672538	3.6300e-003	0.0330	0.0277	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	35.8892	35.8892	6.9000e-004	6.6000e-004	36.1076
Total		**0.5329**	**4.8444**	**4.0693**	**0.0291**		**0.3682**	**0.3682**		**0.3682**	**0.3682**	**0.0000**	**5,273.7256**	**5,273.7256**	**0.1011**	**0.0967**	**5,305.8206**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	8.5972e+007	0.4636	4.2143	3.5400	0.0253		0.3203	0.3203		0.3203	0.3203	0.0000	4,587.7911	4,587.7911	0.0879	0.0841	4,615.7116
Medical Office Building	672538	3.6300e-003	0.0330	0.0277	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	35.8892	35.8892	6.9000e-004	6.6000e-004	36.1076
Hospital	1.21814e+007	0.0657	0.5971	0.5016	3.5800e-003		0.0454	0.0454		0.0454	0.0454	0.0000	650.0453	650.0453	0.0125	0.0119	654.0014
Total		**0.5329**	**4.8444**	**4.0693**	**0.0291**		**0.3682**	**0.3682**		**0.3682**	**0.3682**	**0.0000**	**5,273.7256**	**5,273.7256**	**0.1011**	**0.0967**	**5,305.8206**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.81265e+007	10,899.5789	0.2384	0.0493	10,919.8791
Hospital	2.56836e+006	1,544.3641	0.0338	6.9900e-003	1,547.2405
Medical Office Building	1.96971e+006	1,184.3943	0.0259	5.3600e-003	1,186.6002
Total		**13,628.3373**	**0.2981**	**0.0617**	**13,653.7199**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.81265e+007	10,899.5789	0.2384	0.0493	10,919.8791
Hospital	2.56836e+006	1,544.3641	0.0338	6.9900e-003	1,547.2405
Medical Office Building	1.96971e+006	1,184.3943	0.0259	5.3600e-003	1,186.6002
Total		**13,628.3373**	**0.2981**	**0.0617**	**13,653.7199**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.0432	1.5000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0300	0.0300	8.0000e-005	0.0000	0.0318
Unmitigated	4.0432	1.5000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0300	0.0300	8.0000e-005	0.0000	0.0318

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.9814					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.0603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5200e-003	1.5000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0300	0.0300	8.0000e-005	0.0000	0.0318
Total	**4.0432**	**1.5000e-004**	**0.0157**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0300**	**0.0300**	**8.0000e-005**	**0.0000**	**0.0318**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.9814					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.0603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5200e-003	1.5000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0300	0.0300	8.0000e-005	0.0000	0.0318
Total	**4.0432**	**1.5000e-004**	**0.0157**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0300**	**0.0300**	**8.0000e-005**	**0.0000**	**0.0318**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	793.4968	0.1183	0.0679	817.0332
Unmitigated	793.4968	0.1189	0.0680	817.0806

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	10.3195 / 1.96562	97.5800	0.0146	8.3600e-003	100.4802
Hospital	50.4753 / 9.61434	477.2874	0.0715	0.0409	491.4729
Medical Office Building	23.121 / 4.40401	218.6295	0.0328	0.0187	225.1274
Total		**793.4968**	**0.1189**	**0.0680**	**817.0805**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	10.3195 / 1.96562	97.5800	0.0146	8.3500e-003	100.4744
Hospital	50.4753 / 9.61434	477.2874	0.0712	0.0409	491.4444
Medical Office Building	23.121 / 4.40401	218.6295	0.0326	0.0187	225.1144
Total		**793.4968**	**0.1183**	**0.0679**	**817.0332**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	917.3649	54.2147	0.0000	2,055.8738
Unmitigated	917.3649	54.2147	0.0000	2,055.8738

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1641.04	333.1163	19.6866	0.0000	746.5351
Hospital	888.19	180.2945	10.6551	0.0000	404.0517
Medical Office Building	1990.01	403.9541	23.8730	0.0000	905.2871
Total		**917.3649**	**54.2147**	**0.0000**	**2,055.8738**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1641.04	333.1163	19.6866	0.0000	746.5351
Hospital	888.19	180.2945	10.6551	0.0000	404.0517
Medical Office Building	1990.01	403.9541	23.8730	0.0000	905.2871
Total		**917.3649**	**54.2147**	**0.0000**	**2,055.8738**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Expansion Project Phase IIa Construction

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	100.00	1000sqft	2.30	100,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Demolition - Demo Bldg A 58,705 sq ft

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	10.00	100.00
tblConstructionPhase	NumDays	220.00	224.00
tblConstructionPhase	NumDays	20.00	72.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	70.00

tblConstructionPhase	PhaseEndDate	10/31/2018	6/7/2018
tblConstructionPhase	PhaseEndDate	9/13/2018	9/6/2018
tblConstructionPhase	PhaseStartDate	6/14/2018	1/19/2018
tblConstructionPhase	PhaseStartDate	6/8/2018	6/1/2018
tblGrading	AcresOfGrading	3.50	3.00
tblGrading	MaterialExported	0.00	16,458.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2024
tblTripsAndVMT	HaulingTripNumber	267.00	278.00
tblTripsAndVMT	HaulingTripNumber	2,057.00	2,058.00
tblTripsAndVMT	WorkerTripNumber	32.00	18.00
tblTripsAndVMT	WorkerTripNumber	6.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	7.0518	102.9242	73.0638	0.2338	10.5430	2.9142	13.4572	4.0202	2.6810	6.7012	0.0000	23,248.9269	23,248.9269	0.9367	0.0000	23,268.5966
2018	9.3355	29.6862	26.0929	0.0435	0.4472	1.8140	2.2612	0.1206	1.7230	1.8437	0.0000	4,152.4461	4,152.4461	0.8207	0.0000	4,169.6817

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	7.0518	102.9242	73.0638	0.2338	7.3291	2.9142	10.2433	2.4483	2.6810	5.1293	0.0000	23,248.9269	23,248.9269	0.9367	0.0000	23,268.5966
2018	9.3355	29.6862	26.0929	0.0435	0.4472	1.8140	2.2612	0.1206	1.7230	1.8437	0.0000	4,152.4461	4,152.4461	0.8207	0.0000	4,169.6817

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**29.24**	**0.00**	**20.45**	**37.96**	**0.00**	**18.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2017	7/11/2017	5	72	
2	Grading	Grading	7/12/2017	7/20/2017	5	7	
3	Trenching	Trenching	7/21/2017	8/3/2017	5	10	
4	Building Construction	Building Construction	8/4/2017	6/13/2018	5	224	
5	Architectural Coating	Architectural Coating	1/19/2018	6/7/2018	5	100	
6	Paving	Paving	6/1/2018	9/6/2018	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150,000; Non-Residential Outdoor: 50,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	2,058.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	18.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8075	0.0000	0.8075	0.1223	0.0000	0.1223			0.0000			0.0000
Off-Road	3.0133	32.7320	25.6560	0.0307		1.5453	1.5453		1.4244	1.4244		3,105.8679	3,105.8679	0.9283		3,125.3628
Total	**3.0133**	**32.7320**	**25.6560**	**0.0307**	**0.8075**	**1.5453**	**2.3529**	**0.1223**	**1.4244**	**1.5466**		**3,105.8679**	**3,105.8679**	**0.9283**		**3,125.3628**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0558	0.9717	0.6907	2.7400e-003	0.0674	0.0173	0.0846	0.0185	0.0159	0.0343		271.9064	271.9064	1.7400e-003		271.9429
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0490	0.0648	0.6563	1.8400e-003	0.1677	1.0200e-003	0.1687	0.0445	9.4000e-004	0.0454		146.0597	146.0597	6.5800e-003		146.1979
Total	**0.1048**	**1.0365**	**1.3470**	**4.5800e-003**	**0.2350**	**0.0183**	**0.2533**	**0.0629**	**0.0168**	**0.0797**		**417.9661**	**417.9661**	**8.3200e-003**		**418.1408**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3149	0.0000	0.3149	0.0477	0.0000	0.0477			0.0000			0.0000
Off-Road	3.0133	32.7320	25.6560	0.0307		1.5453	1.5453		1.4244	1.4244	0.0000	3,105.8679	3,105.8679	0.9283		3,125.3628
Total	**3.0133**	**32.7320**	**25.6560**	**0.0307**	**0.3149**	**1.5453**	**1.8603**	**0.0477**	**1.4244**	**1.4721**	**0.0000**	**3,105.8679**	**3,105.8679**	**0.9283**		**3,125.3628**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0558	0.9717	0.6907	2.7400e-003	0.0674	0.0173	0.0846	0.0185	0.0159	0.0343		271.9064	271.9064	1.7400e-003		271.9429
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0490	0.0648	0.6563	1.8400e-003	0.1677	1.0200e-003	0.1687	0.0445	9.4000e-004	0.0454		146.0597	146.0597	6.5800e-003		146.1979
Total	**0.1048**	**1.0365**	**1.3470**	**4.5800e-003**	**0.2350**	**0.0183**	**0.2533**	**0.0629**	**0.0168**	**0.0797**		**417.9661**	**417.9661**	**8.3200e-003**		**418.1408**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.2688	0.0000	5.2688	2.5768	0.0000	2.5768			0.0000			0.0000
Off-Road	2.7620	28.8794	19.9038	0.0236		1.5995	1.5995		1.4715	1.4715		2,418.3333	2,418.3333	0.7410		2,433.8937
Total	**2.7620**	**28.8794**	**19.9038**	**0.0236**	**5.2688**	**1.5995**	**6.8683**	**2.5768**	**1.4715**	**4.0483**		**2,418.3333**	**2,418.3333**	**0.7410**		**2,433.8937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2474	73.9885	52.5912	0.2086	5.1289	1.3139	6.4428	1.4048	1.2086	2.6135		20,704.0086	20,704.0086	0.1324		20,706.7882
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0425	0.0562	0.5688	1.5900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		126.5850	126.5850	5.7100e-003		126.7049
Total	**4.2899**	**74.0447**	**53.1600**	**0.2101**	**5.2742**	**1.3148**	**6.5890**	**1.4434**	**1.2095**	**2.6528**		**20,830.5936**	**20,830.5936**	**0.1381**		**20,833.4931**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0548	0.0000	2.0548	1.0050	0.0000	1.0050			0.0000			0.0000
Off-Road	2.7620	28.8794	19.9038	0.0236		1.5995	1.5995		1.4715	1.4715	0.0000	2,418.3333	2,418.3333	0.7410		2,433.8937
Total	**2.7620**	**28.8794**	**19.9038**	**0.0236**	**2.0548**	**1.5995**	**3.6543**	**1.0050**	**1.4715**	**2.4765**	**0.0000**	**2,418.3333**	**2,418.3333**	**0.7410**		**2,433.8937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2474	73.9885	52.5912	0.2086	5.1289	1.3139	6.4428	1.4048	1.2086	2.6135		20,704.0086	20,704.0086	0.1324		20,706.7882
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0425	0.0562	0.5688	1.5900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		126.5850	126.5850	5.7100e-003		126.7049
Total	**4.2899**	**74.0447**	**53.1600**	**0.2101**	**5.2742**	**1.3148**	**6.5890**	**1.4434**	**1.2095**	**2.6528**		**20,830.5936**	**20,830.5936**	**0.1381**		**20,833.4931**

3.4 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6790	7.0607	5.8149	8.4000e-003		0.4266	0.4266		0.3924	0.3924		859.5267	859.5267	0.2634		865.0572
Total	**0.6790**	**7.0607**	**5.8149**	**8.4000e-003**		**0.4266**	**0.4266**		**0.3924**	**0.3924**		**859.5267**	**859.5267**	**0.2634**		**865.0572**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0163	0.0216	0.2188	6.1000e-004	0.0559	3.4000e-004	0.0562	0.0148	3.1000e-004	0.0151		48.6866	48.6866	2.1900e-003		48.7327
Total	**0.0163**	**0.0216**	**0.2188**	**6.1000e-004**	**0.0559**	**3.4000e-004**	**0.0562**	**0.0148**	**3.1000e-004**	**0.0151**		**48.6866**	**48.6866**	**2.1900e-003**		**48.7327**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6790	7.0607	5.8149	8.4000e-003		0.4266	0.4266		0.3924	0.3924	0.0000	859.5267	859.5267	0.2634		865.0572
Total	**0.6790**	**7.0607**	**5.8149**	**8.4000e-003**		**0.4266**	**0.4266**		**0.3924**	**0.3924**	**0.0000**	**859.5267**	**859.5267**	**0.2634**		**865.0572**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0163	0.0216	0.2188	6.1000e-004	0.0559	3.4000e-004	0.0562	0.0148	3.1000e-004	0.0151		48.6866	48.6866	2.1900e-003		48.7327
Total	**0.0163**	**0.0216**	**0.2188**	**6.1000e-004**	**0.0559**	**3.4000e-004**	**0.0562**	**0.0148**	**3.1000e-004**	**0.0151**		**48.6866**	**48.6866**	**2.1900e-003**		**48.7327**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2393	17.8134	12.8411	0.0193		1.2067	1.2067		1.1444	1.1444		1,869.9746	1,869.9746	0.4138		1,878.6649
Total	**2.2393**	**17.8134**	**12.8411**	**0.0193**		**1.2067**	**1.2067**		**1.1444**	**1.1444**		**1,869.9746**	**1,869.9746**	**0.4138**		**1,878.6649**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1195	1.2475	1.5100	3.3300e-003	0.1007	0.0236	0.1242	0.0288	0.0217	0.0504		329.4550	329.4550	2.1900e-003		329.5011
Worker	0.0588	0.0778	0.7876	2.2000e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1300e-003	0.0545		175.2716	175.2716	7.9000e-003		175.4375
Total	**0.1783**	**1.3253**	**2.2976**	**5.5300e-003**	**0.3019**	**0.0248**	**0.3266**	**0.0821**	**0.0228**	**0.1049**		**504.7266**	**504.7266**	**0.0101**		**504.9386**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2393	17.8134	12.8411	0.0193		1.2067	1.2067		1.1444	1.1444	0.0000	1,869.9746	1,869.9746	0.4138		1,878.6649
Total	**2.2393**	**17.8134**	**12.8411**	**0.0193**		**1.2067**	**1.2067**		**1.1444**	**1.1444**	**0.0000**	**1,869.9746**	**1,869.9746**	**0.4138**		**1,878.6649**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1195	1.2475	1.5100	3.3300e-003	0.1007	0.0236	0.1242	0.0288	0.0217	0.0504		329.4550	329.4550	2.1900e-003		329.5011
Worker	0.0588	0.0778	0.7876	2.2000e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1300e-003	0.0545		175.2716	175.2716	7.9000e-003		175.4375
Total	**0.1783**	**1.3253**	**2.2976**	**5.5300e-003**	**0.3019**	**0.0248**	**0.3266**	**0.0821**	**0.0228**	**0.1049**		**504.7266**	**504.7266**	**0.0101**		**504.9386**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9373	15.8319	12.4646	0.0193		1.0193	1.0193		0.9678	0.9678		1,852.8199	1,852.8199	0.4030		1,861.2830
Total	**1.9373**	**15.8319**	**12.4646**	**0.0193**		**1.0193**	**1.0193**		**0.9678**	**0.9678**		**1,852.8199**	**1,852.8199**	**0.4030**		**1,861.2830**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1105	1.1405	1.4494	3.3300e-003	0.1006	0.0222	0.1229	0.0287	0.0204	0.0492		323.7147	323.7147	2.1800e-003		323.7604
Worker	0.0528	0.0702	0.7103	2.2000e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1200e-003	0.0545		168.6076	168.6076	7.3100e-003		168.7610
Total	**0.1633**	**1.2107**	**2.1597**	**5.5300e-003**	**0.3018**	**0.0234**	**0.3253**	**0.0821**	**0.0215**	**0.1036**		**492.3222**	**492.3222**	**9.4900e-003**		**492.5215**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9373	15.8319	12.4646	0.0193		1.0193	1.0193		0.9678	0.9678	0.0000	1,852.8199	1,852.8199	0.4030		1,861.2830
Total	**1.9373**	**15.8319**	**12.4646**	**0.0193**		**1.0193**	**1.0193**		**0.9678**	**0.9678**	**0.0000**	**1,852.8199**	**1,852.8199**	**0.4030**		**1,861.2830**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1105	1.1405	1.4494	3.3300e-003	0.1006	0.0222	0.1229	0.0287	0.0204	0.0492		323.7147	323.7147	2.1800e-003		323.7604
Worker	0.0528	0.0702	0.7103	2.2000e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1200e-003	0.0545		168.6076	168.6076	7.3100e-003		168.7610
Total	**0.1633**	**1.2107**	**2.1597**	**5.5300e-003**	**0.3018**	**0.0234**	**0.3253**	**0.0821**	**0.0215**	**0.1036**		**492.3222**	**492.3222**	**9.4900e-003**		**492.5215**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5973	4.0115	3.7084	5.9400e-003		0.3011	0.3011		0.3011	0.3011		562.8971	562.8971	0.0535		564.0203
Total	**6.3910**	**4.0115**	**3.7084**	**5.9400e-003**		**0.3011**	**0.3011**		**0.3011**	**0.3011**		**562.8971**	**562.8971**	**0.0535**		**564.0203**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0147	0.0195	0.1973	6.1000e-004	0.0559	3.3000e-004	0.0562	0.0148	3.1000e-004	0.0151		46.8354	46.8354	2.0300e-003		46.8781
Total	**0.0147**	**0.0195**	**0.1973**	**6.1000e-004**	**0.0559**	**3.3000e-004**	**0.0562**	**0.0148**	**3.1000e-004**	**0.0151**		**46.8354**	**46.8354**	**2.0300e-003**		**46.8781**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5973	4.0115	3.7084	5.9400e-003		0.3011	0.3011		0.3011	0.3011	0.0000	562.8971	562.8971	0.0535		564.0203
Total	**6.3910**	**4.0115**	**3.7084**	**5.9400e-003**		**0.3011**	**0.3011**		**0.3011**	**0.3011**	**0.0000**	**562.8971**	**562.8971**	**0.0535**		**564.0203**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0147	0.0195	0.1973	6.1000e-004	0.0559	3.3000e-004	0.0562	0.0148	3.1000e-004	0.0151		46.8354	46.8354	2.0300e-003		46.8781
Total	**0.0147**	**0.0195**	**0.1973**	**6.1000e-004**	**0.0559**	**3.3000e-004**	**0.0562**	**0.0148**	**3.1000e-004**	**0.0151**		**46.8354**	**46.8354**	**2.0300e-003**		**46.8781**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8057	8.5814	7.2472	0.0112		0.4693	0.4693		0.4318	0.4318		1,122.6347	1,122.6347	0.3495		1,129.9741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8057**	**8.5814**	**7.2472**	**0.0112**		**0.4693**	**0.4693**		**0.4318**	**0.4318**		**1,122.6347**	**1,122.6347**	**0.3495**		**1,129.9741**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0235	0.0312	0.3157	9.8000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		74.9367	74.9367	3.2500e-003		75.0049
Total	**0.0235**	**0.0312**	**0.3157**	**9.8000e-004**	**0.0894**	**5.4000e-004**	**0.0900**	**0.0237**	**5.0000e-004**	**0.0242**		**74.9367**	**74.9367**	**3.2500e-003**		**75.0049**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8057	8.5814	7.2472	0.0112		0.4693	0.4693		0.4318	0.4318	0.0000	1,122.6347	1,122.6347	0.3495		1,129.9741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8057**	**8.5814**	**7.2472**	**0.0112**		**0.4693**	**0.4693**		**0.4318**	**0.4318**	**0.0000**	**1,122.6347**	**1,122.6347**	**0.3495**		**1,129.9741**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0235	0.0312	0.3157	9.8000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		74.9367	74.9367	3.2500e-003		75.0049
Total	**0.0235**	**0.0312**	**0.3157**	**9.8000e-004**	**0.0894**	**5.4000e-004**	**0.0900**	**0.0237**	**5.0000e-004**	**0.0242**		**74.9367**	**74.9367**	**3.2500e-003**		**75.0049**

RCH Expansion Project Phase IIa Construction

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	100.00	1000sqft	2.30	100,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Demolition - Demo Bldg A 58,705 sq ft

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	10.00	100.00
tblConstructionPhase	NumDays	220.00	224.00
tblConstructionPhase	NumDays	20.00	72.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	70.00
tblConstructionPhase	PhaseEndDate	10/31/2018	6/7/2018
tblConstructionPhase	PhaseEndDate	9/13/2018	9/6/2018

tblConstructionPhase	PhaseStartDate	6/14/2018	1/19/2018
tblConstructionPhase	PhaseStartDate	6/8/2018	6/1/2018
tblGrading	AcresOfGrading	3.50	3.00
tblGrading	MaterialExported	0.00	16,458.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2024
tblTripsAndVMT	HaulingTripNumber	267.00	278.00
tblTripsAndVMT	HaulingTripNumber	2,057.00	2,058.00
tblTripsAndVMT	WorkerTripNumber	32.00	18.00
tblTripsAndVMT	WorkerTripNumber	6.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.8968	100.2143	67.9502	0.2344	10.5430	2.9117	13.4547	4.0202	2.6786	6.6988	0.0000	23,312.0179	23,312.0179	0.9366	0.0000	23,331.6870
2018	9.3338	29.6526	26.0973	0.0439	0.4472	1.8138	2.2610	0.1206	1.7229	1.8435	0.0000	4,182.7283	4,182.7283	0.8207	0.0000	4,199.9622
Total	**16.2306**	**129.8669**	**94.0475**	**0.2783**	**10.9902**	**4.7255**	**15.7157**	**4.1409**	**4.4015**	**8.5423**	**0.0000**	**27,494.7461**	**27,494.7461**	**1.7573**	**0.0000**	**27,531.6492**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.8968	100.2143	67.9502	0.2344	7.3291	2.9117	10.2407	2.4483	2.6786	5.1270	0.0000	23,312.0179	23,312.0179	0.9366	0.0000	23,331.6870
2018	9.3338	29.6526	26.0973	0.0439	0.4472	1.8138	2.2610	0.1206	1.7229	1.8435	0.0000	4,182.7283	4,182.7283	0.8207	0.0000	4,199.9622
Total	**16.2306**	**129.8669**	**94.0475**	**0.2783**	**7.7762**	**4.7255**	**12.5017**	**2.5690**	**4.4015**	**6.9705**	**0.0000**	**27,494.7461**	**27,494.7461**	**1.7573**	**0.0000**	**27,531.6492**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**29.24**	**0.00**	**20.45**	**37.96**	**0.00**	**18.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2017	7/11/2017	5	72	
2	Grading	Grading	7/12/2017	7/20/2017	5	7	
3	Trenching	Trenching	7/21/2017	8/3/2017	5	10	
4	Building Construction	Building Construction	8/4/2017	6/13/2018	5	224	
5	Architectural Coating	Architectural Coating	1/19/2018	6/7/2018	5	100	
6	Paving	Paving	6/1/2018	9/6/2018	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150,000; Non-Residential Outdoor: 50,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Cement and Mortar Mixers	0	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	2,058.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	18.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8075	0.0000	0.8075	0.1223	0.0000	0.1223			0.0000			0.0000
Off-Road	3.0133	32.7320	25.6560	0.0307		1.5453	1.5453		1.4244	1.4244		3,105.8679	3,105.8679	0.9283		3,125.3628
Total	**3.0133**	**32.7320**	**25.6560**	**0.0307**	**0.8075**	**1.5453**	**2.3529**	**0.1223**	**1.4244**	**1.5466**		**3,105.8679**	**3,105.8679**	**0.9283**		**3,125.3628**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0537	0.9362	0.6223	2.7400e-003	0.0674	0.0172	0.0846	0.0185	0.0158	0.0343		272.5780	272.5780	1.7100e-003		272.6139
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0515	0.0609	0.7640	2.0100e-003	0.1677	1.0200e-003	0.1687	0.0445	9.4000e-004	0.0454		159.8484	159.8484	6.5800e-003		159.9867
Total	**0.1052**	**0.9970**	**1.3863**	**4.7500e-003**	**0.2350**	**0.0182**	**0.2533**	**0.0629**	**0.0168**	**0.0797**		**432.4265**	**432.4265**	**8.2900e-003**		**432.6007**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3149	0.0000	0.3149	0.0477	0.0000	0.0477			0.0000			0.0000
Off-Road	3.0133	32.7320	25.6560	0.0307		1.5453	1.5453		1.4244	1.4244	0.0000	3,105.8679	3,105.8679	0.9283		3,125.3628
Total	**3.0133**	**32.7320**	**25.6560**	**0.0307**	**0.3149**	**1.5453**	**1.8603**	**0.0477**	**1.4244**	**1.4721**	**0.0000**	**3,105.8679**	**3,105.8679**	**0.9283**		**3,125.3628**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0537	0.9362	0.6223	2.7400e-003	0.0674	0.0172	0.0846	0.0185	0.0158	0.0343		272.5780	272.5780	1.7100e-003		272.6139
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0515	0.0609	0.7640	2.0100e-003	0.1677	1.0200e-003	0.1687	0.0445	9.4000e-004	0.0454		159.8484	159.8484	6.5800e-003		159.9867

Total	**0.1052**	**0.9970**	**1.3863**	**4.7500e-003**	**0.2350**	**0.0182**	**0.2533**	**0.0629**	**0.0168**	**0.0797**		**432.4265**	**432.4265**	**8.2900e-003**		**432.6007**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.2688	0.0000	5.2688	2.5768	0.0000	2.5768			0.0000			0.0000
Off-Road	2.7620	28.8794	19.9038	0.0236		1.5995	1.5995		1.4715	1.4715		2,418.3333	2,418.3333	0.7410		2,433.8937
Total	**2.7620**	**28.8794**	**19.9038**	**0.0236**	**5.2688**	**1.5995**	**6.8683**	**2.5768**	**1.4715**	**4.0483**		**2,418.3333**	**2,418.3333**	**0.7410**		**2,433.8937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0902	71.2821	47.3843	0.2090	5.1289	1.3113	6.4402	1.4048	1.2063	2.6112		20,755.1493	20,755.1493	0.1302		20,757.8844
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0446	0.0528	0.6621	1.7400e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		138.5353	138.5353	5.7100e-003		138.6552
Total	**4.1348**	**71.3349**	**48.0464**	**0.2107**	**5.2742**	**1.3122**	**6.5864**	**1.4434**	**1.2071**	**2.6505**		**20,893.6846**	**20,893.6846**	**0.1360**		**20,896.5396**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0548	0.0000	2.0548	1.0050	0.0000	1.0050			0.0000			0.0000
Off-Road	2.7620	28.8794	19.9038	0.0236		1.5995	1.5995		1.4715	1.4715	0.0000	2,418.3333	2,418.3333	0.7410		2,433.8937
Total	**2.7620**	**28.8794**	**19.9038**	**0.0236**	**2.0548**	**1.5995**	**3.6543**	**1.0050**	**1.4715**	**2.4765**	**0.0000**	**2,418.3333**	**2,418.3333**	**0.7410**		**2,433.8937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0902	71.2821	47.3843	0.2090	5.1289	1.3113	6.4402	1.4048	1.2063	2.6112		20,755.1493	20,755.1493	0.1302		20,757.8844
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0446	0.0528	0.6621	1.7400e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		138.5353	138.5353	5.7100e-003		138.6552
Total	**4.1348**	**71.3349**	**48.0464**	**0.2107**	**5.2742**	**1.3122**	**6.5864**	**1.4434**	**1.2071**	**2.6505**		**20,893.6846**	**20,893.6846**	**0.1360**		**20,896.5396**

3.4 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6790	7.0607	5.8149	8.4000e-003		0.4266	0.4266		0.3924	0.3924		859.5267	859.5267	0.2634		865.0572
Total	**0.6790**	**7.0607**	**5.8149**	**8.4000e-003**		**0.4266**	**0.4266**		**0.3924**	**0.3924**		**859.5267**	**859.5267**	**0.2634**		**865.0572**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0172	0.0203	0.2547	6.7000e-004	0.0559	3.4000e-004	0.0562	0.0148	3.1000e-004	0.0151		53.2828	53.2828	2.1900e-003		53.3289
Total	**0.0172**	**0.0203**	**0.2547**	**6.7000e-004**	**0.0559**	**3.4000e-004**	**0.0562**	**0.0148**	**3.1000e-004**	**0.0151**		**53.2828**	**53.2828**	**2.1900e-003**		**53.3289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6790	7.0607	5.8149	8.4000e-003		0.4266	0.4266		0.3924	0.3924	0.0000	859.5267	859.5267	0.2634		865.0572
Total	**0.6790**	**7.0607**	**5.8149**	**8.4000e-003**		**0.4266**	**0.4266**		**0.3924**	**0.3924**	**0.0000**	**859.5267**	**859.5267**	**0.2634**		**865.0572**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0172	0.0203	0.2547	6.7000e-004	0.0559	3.4000e-004	0.0562	0.0148	3.1000e-004	0.0151		53.2828	53.2828	2.1900e-003		53.3289
Total	**0.0172**	**0.0203**	**0.2547**	**6.7000e-004**	**0.0559**	**3.4000e-004**	**0.0562**	**0.0148**	**3.1000e-004**	**0.0151**		**53.2828**	**53.2828**	**2.1900e-003**		**53.3289**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2393	17.8134	12.8411	0.0193		1.2067	1.2067		1.1444	1.1444		1,869.9746	1,869.9746	0.4138		1,878.6649
Total	**2.2393**	**17.8134**	**12.8411**	**0.0193**		**1.2067**	**1.2067**		**1.1444**	**1.1444**		**1,869.9746**	**1,869.9746**	**0.4138**		**1,878.6649**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1123	1.2178	1.3123	3.3600e-003	0.1007	0.0234	0.1240	0.0288	0.0215	0.0502		332.3403	332.3403	2.1200e-003		332.3848
Worker	0.0618	0.0731	0.9168	2.4100e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1300e-003	0.0545		191.8181	191.8181	7.9000e-003		191.9841
Total	**0.1741**	**1.2909**	**2.2290**	**5.7700e-003**	**0.3019**	**0.0246**	**0.3264**	**0.0821**	**0.0226**	**0.1047**		**524.1584**	**524.1584**	**0.0100**		**524.3688**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2393	17.8134	12.8411	0.0193		1.2067	1.2067		1.1444	1.1444	0.0000	1,869.9746	1,869.9746	0.4138		1,878.6649
Total	**2.2393**	**17.8134**	**12.8411**	**0.0193**		**1.2067**	**1.2067**		**1.1444**	**1.1444**	**0.0000**	**1,869.9746**	**1,869.9746**	**0.4138**		**1,878.6649**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1123	1.2178	1.3123	3.3600e-003	0.1007	0.0234	0.1240	0.0288	0.0215	0.0502		332.3403	332.3403	2.1200e-003		332.3848
Worker	0.0618	0.0731	0.9168	2.4100e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1300e-003	0.0545		191.8181	191.8181	7.9000e-003		191.9841
Total	**0.1741**	**1.2909**	**2.2290**	**5.7700e-003**	**0.3019**	**0.0246**	**0.3264**	**0.0821**	**0.0226**	**0.1047**		**524.1584**	**524.1584**	**0.0100**		**524.3688**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9373	15.8319	12.4646	0.0193		1.0193	1.0193		0.9678	0.9678		1,852.8199	1,852.8199	0.4030		1,861.2830
Total	**1.9373**	**15.8319**	**12.4646**	**0.0193**		**1.0193**	**1.0193**		**0.9678**	**0.9678**		**1,852.8199**	**1,852.8199**	**0.4030**		**1,861.2830**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1039	1.1141	1.2490	3.3500e-003	0.1006	0.0220	0.1227	0.0287	0.0203	0.0490		326.5575	326.5575	2.1000e-003		326.6017
Worker	0.0557	0.0661	0.8293	2.4100e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1200e-003	0.0545		184.5400	184.5400	7.3100e-003		184.6935
Total	**0.1596**	**1.1801**	**2.0782**	**5.7600e-003**	**0.3018**	**0.0232**	**0.3251**	**0.0821**	**0.0214**	**0.1035**		**511.0976**	**511.0976**	**9.4100e-003**		**511.2952**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9373	15.8319	12.4646	0.0193		1.0193	1.0193		0.9678	0.9678	0.0000	1,852.8199	1,852.8199	0.4030		1,861.2830
Total	**1.9373**	**15.8319**	**12.4646**	**0.0193**		**1.0193**	**1.0193**		**0.9678**	**0.9678**	**0.0000**	**1,852.8199**	**1,852.8199**	**0.4030**		**1,861.2830**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1039	1.1141	1.2490	3.3500e-003	0.1006	0.0220	0.1227	0.0287	0.0203	0.0490		326.5575	326.5575	2.1000e-003		326.6017
Worker	0.0557	0.0661	0.8293	2.4100e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1200e-003	0.0545		184.5400	184.5400	7.3100e-003		184.6935
Total	**0.1596**	**1.1801**	**2.0782**	**5.7600e-003**	**0.3018**	**0.0232**	**0.3251**	**0.0821**	**0.0214**	**0.1035**		**511.0976**	**511.0976**	**9.4100e-003**		**511.2952**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5973	4.0115	3.7084	5.9400e-003		0.3011	0.3011		0.3011	0.3011		562.8971	562.8971	0.0535		564.0203
Total	**6.3910**	**4.0115**	**3.7084**	**5.9400e-003**		**0.3011**	**0.3011**		**0.3011**	**0.3011**		**562.8971**	**562.8971**	**0.0535**		**564.0203**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0155	0.0184	0.2304	6.7000e-004	0.0559	3.3000e-004	0.0562	0.0148	3.1000e-004	0.0151		51.2611	51.2611	2.0300e-003		51.3037
Total	**0.0155**	**0.0184**	**0.2304**	**6.7000e-004**	**0.0559**	**3.3000e-004**	**0.0562**	**0.0148**	**3.1000e-004**	**0.0151**		**51.2611**	**51.2611**	**2.0300e-003**		**51.3037**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5973	4.0115	3.7084	5.9400e-003		0.3011	0.3011		0.3011	0.3011	0.0000	562.8971	562.8971	0.0535		564.0203
Total	**6.3910**	**4.0115**	**3.7084**	**5.9400e-003**		**0.3011**	**0.3011**		**0.3011**	**0.3011**	**0.0000**	**562.8971**	**562.8971**	**0.0535**		**564.0203**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0155	0.0184	0.2304	6.7000e-004	0.0559	3.3000e-004	0.0562	0.0148	3.1000e-004	0.0151		51.2611	51.2611	2.0300e-003		51.3037
Total	**0.0155**	**0.0184**	**0.2304**	**6.7000e-004**	**0.0559**	**3.3000e-004**	**0.0562**	**0.0148**	**3.1000e-004**	**0.0151**		**51.2611**	**51.2611**	**2.0300e-003**		**51.3037**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8057	8.5814	7.2472	0.0112		0.4693	0.4693		0.4318	0.4318		1,122.6347	1,122.6347	0.3495		1,129.9741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8057**	**8.5814**	**7.2472**	**0.0112**		**0.4693**	**0.4693**		**0.4318**	**0.4318**		**1,122.6347**	**1,122.6347**	**0.3495**		**1,129.9741**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0248	0.0294	0.3686	1.0700e-003	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		82.0178	82.0178	3.2500e-003		82.0860
Total	**0.0248**	**0.0294**	**0.3686**	**1.0700e-003**	**0.0894**	**5.4000e-004**	**0.0900**	**0.0237**	**5.0000e-004**	**0.0242**		**82.0178**	**82.0178**	**3.2500e-003**		**82.0860**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8057	8.5814	7.2472	0.0112		0.4693	0.4693		0.4318	0.4318	0.0000	1,122.6347	1,122.6347	0.3495		1,129.9741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8057**	**8.5814**	**7.2472**	**0.0112**		**0.4693**	**0.4693**		**0.4318**	**0.4318**	**0.0000**	**1,122.6347**	**1,122.6347**	**0.3495**		**1,129.9741**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0248	0.0294	0.3686	1.0700e-003	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		82.0178	82.0178	3.2500e-003		82.0860
Total	**0.0248**	**0.0294**	**0.3686**	**1.0700e-003**	**0.0894**	**5.4000e-004**	**0.0900**	**0.0237**	**5.0000e-004**	**0.0242**		**82.0178**	**82.0178**	**3.2500e-003**		**82.0860**

RCH Expansion Project Phase IIa Construction

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	100.00	1000sqft	2.30	100,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Demolition - Demo Bldg A 58,705 sq ft

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstructionPhase	NumDays	10.00	100.00
tblConstructionPhase	NumDays	220.00	224.00
tblConstructionPhase	NumDays	20.00	72.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	70.00

tblConstructionPhase	PhaseEndDate	10/31/2018	6/7/2018
tblConstructionPhase	PhaseEndDate	9/13/2018	9/6/2018
tblConstructionPhase	PhaseStartDate	6/14/2018	1/19/2018
tblConstructionPhase	PhaseStartDate	6/8/2018	6/1/2018
tblGrading	AcresOfGrading	3.50	3.00
tblGrading	MaterialExported	0.00	16,458.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2024
tblTripsAndVMT	HaulingTripNumber	267.00	278.00
tblTripsAndVMT	HaulingTripNumber	2,057.00	2,058.00
tblTripsAndVMT	WorkerTripNumber	32.00	18.00
tblTripsAndVMT	WorkerTripNumber	6.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2681	2.6319	2.0701	3.4500e-003	0.0901	0.1339	0.2239	0.0250	0.1251	0.1501	0.0000	307.5756	307.5756	0.0550	0.0000	308.7298
2018	0.4729	1.5101	1.3273	2.2200e-003	0.0234	0.0930	0.1164	6.3200e-003	0.0886	0.0949	0.0000	191.4759	191.4759	0.0358	0.0000	192.2276
Total	**0.7410**	**4.1420**	**3.3973**	**5.6700e-003**	**0.1134**	**0.2269**	**0.3403**	**0.0313**	**0.2137**	**0.2450**	**0.0000**	**499.0515**	**499.0515**	**0.0908**	**0.0000**	**500.9574**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2681	2.6319	2.0700	3.4500e-003	0.0611	0.1339	0.1950	0.0168	0.1251	0.1419	0.0000	307.5753	307.5753	0.0550	0.0000	308.7295
2018	0.4729	1.5101	1.3273	2.2200e-003	0.0234	0.0930	0.1164	6.3200e-003	0.0886	0.0949	0.0000	191.4758	191.4758	0.0358	0.0000	192.2274
Total	**0.7410**	**4.1420**	**3.3973**	**5.6700e-003**	**0.0844**	**0.2269**	**0.3113**	**0.0231**	**0.2137**	**0.2368**	**0.0000**	**499.0511**	**499.0511**	**0.0908**	**0.0000**	**500.9569**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**25.56**	**0.00**	**8.52**	**26.15**	**0.00**	**3.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2017	7/11/2017	5	72	
2	Grading	Grading	7/12/2017	7/20/2017	5	7	
3	Trenching	Trenching	7/21/2017	8/3/2017	5	10	
4	Building Construction	Building Construction	8/4/2017	6/13/2018	5	224	
5	Architectural Coating	Architectural Coating	1/19/2018	6/7/2018	5	100	
6	Paving	Paving	6/1/2018	9/6/2018	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150,000; Non-Residential Outdoor: 50,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	2,058.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	18.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0291	0.0000	0.0291	4.4000e-003	0.0000	4.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1085	1.1784	0.9236	1.1000e-003		0.0556	0.0556		0.0513	0.0513	0.0000	101.4335	101.4335	0.0303	0.0000	102.0701
Total	**0.1085**	**1.1784**	**0.9236**	**1.1000e-003**	**0.0291**	**0.0556**	**0.0847**	**4.4000e-003**	**0.0513**	**0.0557**	**0.0000**	**101.4335**	**101.4335**	**0.0303**	**0.0000**	**102.0701**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-003	0.0355	0.0255	1.0000e-004	2.3900e-003	6.2000e-004	3.0100e-003	6.6000e-004	5.7000e-004	1.2300e-003	0.0000	8.8928	8.8928	6.0000e-005	0.0000	8.8940
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6600e-003	2.4300e-003	0.0245	7.0000e-005	5.9400e-003	4.0000e-005	5.9700e-003	1.5800e-003	3.0000e-005	1.6100e-003	0.0000	4.8352	4.8352	2.2000e-004	0.0000	4.8398
Total	**3.6600e-003**	**0.0380**	**0.0500**	**1.7000e-004**	**8.3300e-003**	**6.6000e-004**	**8.9800e-003**	**2.2400e-003**	**6.0000e-004**	**2.8400e-003**	**0.0000**	**13.7281**	**13.7281**	**2.8000e-004**	**0.0000**	**13.7338**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0113	0.0000	0.0113	1.7200e-003	0.0000	1.7200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1085	1.1784	0.9236	1.1000e-003		0.0556	0.0556		0.0513	0.0513	0.0000	101.4333	101.4333	0.0303	0.0000	102.0700
Total	**0.1085**	**1.1784**	**0.9236**	**1.1000e-003**	**0.0113**	**0.0556**	**0.0670**	**1.7200e-003**	**0.0513**	**0.0530**	**0.0000**	**101.4333**	**101.4333**	**0.0303**	**0.0000**	**102.0700**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-003	0.0355	0.0255	1.0000e-004	2.3900e-003	6.2000e-004	3.0100e-003	6.6000e-004	5.7000e-004	1.2300e-003	0.0000	8.8928	8.8928	6.0000e-005	0.0000	8.8940
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6600e-003	2.4300e-003	0.0245	7.0000e-005	5.9400e-003	4.0000e-005	5.9700e-003	1.5800e-003	3.0000e-005	1.6100e-003	0.0000	4.8352	4.8352	2.2000e-004	0.0000	4.8398
Total	**3.6600e-003**	**0.0380**	**0.0500**	**1.7000e-004**	**8.3300e-003**	**6.6000e-004**	**8.9800e-003**	**2.2400e-003**	**6.0000e-004**	**2.8400e-003**	**0.0000**	**13.7281**	**13.7281**	**2.8000e-004**	**0.0000**	**13.7338**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0184	0.0000	0.0184	9.0200e-003	0.0000	9.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6700e-003	0.1011	0.0697	8.0000e-005		5.6000e-003	5.6000e-003		5.1500e-003	5.1500e-003	0.0000	7.6786	7.6786	2.3500e-003	0.0000	7.7280
Total	**9.6700e-003**	**0.1011**	**0.0697**	**8.0000e-005**	**0.0184**	**5.6000e-003**	**0.0240**	**9.0200e-003**	**5.1500e-003**	**0.0142**	**0.0000**	**7.6786**	**7.6786**	**2.3500e-003**	**0.0000**	**7.7280**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.2631	0.1886	7.3000e-004	0.0177	4.5900e-003	0.0223	4.8500e-003	4.2300e-003	9.0800e-003	0.0000	65.8324	65.8324	4.2000e-004	0.0000	65.8412
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.0000e-004	2.0600e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4074	0.4074	2.0000e-005	0.0000	0.4078
Total	**0.0150**	**0.2633**	**0.1906**	**7.4000e-004**	**0.0182**	**4.5900e-003**	**0.0228**	**4.9800e-003**	**4.2300e-003**	**9.2200e-003**	**0.0000**	**66.2399**	**66.2399**	**4.4000e-004**	**0.0000**	**66.2490**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.1900e-003	0.0000	7.1900e-003	3.5200e-003	0.0000	3.5200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6700e-003	0.1011	0.0697	8.0000e-005		5.6000e-003	5.6000e-003		5.1500e-003	5.1500e-003	0.0000	7.6786	7.6786	2.3500e-003	0.0000	7.7280
Total	**9.6700e-003**	**0.1011**	**0.0697**	**8.0000e-005**	**7.1900e-003**	**5.6000e-003**	**0.0128**	**3.5200e-003**	**5.1500e-003**	**8.6700e-003**	**0.0000**	**7.6786**	**7.6786**	**2.3500e-003**	**0.0000**	**7.7280**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.2631	0.1886	7.3000e-004	0.0177	4.5900e-003	0.0223	4.8500e-003	4.2300e-003	9.0800e-003	0.0000	65.8324	65.8324	4.2000e-004	0.0000	65.8412
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.0000e-004	2.0600e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4074	0.4074	2.0000e-005	0.0000	0.4078
Total	**0.0150**	**0.2633**	**0.1906**	**7.4000e-004**	**0.0182**	**4.5900e-003**	**0.0228**	**4.9800e-003**	**4.2300e-003**	**9.2200e-003**	**0.0000**	**66.2399**	**66.2399**	**4.4000e-004**	**0.0000**	**66.2490**

3.4 Trenching - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0353	0.0291	4.0000e-005		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003	0.0000	3.8988	3.8988	1.1900e-003	0.0000	3.9238
Total	**3.4000e-003**	**0.0353**	**0.0291**	**4.0000e-005**		**2.1300e-003**	**2.1300e-003**		**1.9600e-003**	**1.9600e-003**	**0.0000**	**3.8988**	**3.8988**	**1.1900e-003**	**0.0000**	**3.9238**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.1000e-004	1.1300e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2239	0.2239	1.0000e-005	0.0000	0.2241
Total	**8.0000e-005**	**1.1000e-004**	**1.1300e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2239**	**0.2239**	**1.0000e-005**	**0.0000**	**0.2241**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4000e-003	0.0353	0.0291	4.0000e-005		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003	0.0000	3.8987	3.8987	1.1900e-003	0.0000	3.9238
Total	**3.4000e-003**	**0.0353**	**0.0291**	**4.0000e-005**		**2.1300e-003**	**2.1300e-003**		**1.9600e-003**	**1.9600e-003**	**0.0000**	**3.8987**	**3.8987**	**1.1900e-003**	**0.0000**	**3.9238**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.1000e-004	1.1300e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2239	0.2239	1.0000e-005	0.0000	0.2241
Total	**8.0000e-005**	**1.1000e-004**	**1.1300e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2239**	**0.2239**	**1.0000e-005**	**0.0000**	**0.2241**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1187	0.9441	0.6806	1.0200e-003		0.0640	0.0640		0.0607	0.0607	0.0000	89.9099	89.9099	0.0199	0.0000	90.3277
Total	**0.1187**	**0.9441**	**0.6806**	**1.0200e-003**		**0.0640**	**0.0640**		**0.0607**	**0.0607**	**0.0000**	**89.9099**	**89.9099**	**0.0199**	**0.0000**	**90.3277**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2700e-003	0.0674	0.0822	1.8000e-004	5.2600e-003	1.2400e-003	6.5000e-003	1.5100e-003	1.1400e-003	2.6500e-003	0.0000	15.9209	15.9209	1.0000e-004	0.0000	15.9231
Worker	2.9200e-003	4.3000e-003	0.0433	1.2000e-004	0.0105	6.0000e-005	0.0106	2.7800e-003	6.0000e-005	2.8400e-003	0.0000	8.5423	8.5423	3.8000e-004	0.0000	8.5502
Total	**9.1900e-003**	**0.0717**	**0.1254**	**3.0000e-004**	**0.0158**	**1.3000e-003**	**0.0171**	**4.2900e-003**	**1.2000e-003**	**5.4900e-003**	**0.0000**	**24.4632**	**24.4632**	**4.8000e-004**	**0.0000**	**24.4733**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1187	0.9441	0.6806	1.0200e-003		0.0640	0.0640		0.0607	0.0607	0.0000	89.9098	89.9098	0.0199	0.0000	90.3276
Total	**0.1187**	**0.9441**	**0.6806**	**1.0200e-003**		**0.0640**	**0.0640**		**0.0607**	**0.0607**	**0.0000**	**89.9098**	**89.9098**	**0.0199**	**0.0000**	**90.3276**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2700e-003	0.0674	0.0822	1.8000e-004	5.2600e-003	1.2400e-003	6.5000e-003	1.5100e-003	1.1400e-003	2.6500e-003	0.0000	15.9209	15.9209	1.0000e-004	0.0000	15.9231
Worker	2.9200e-003	4.3000e-003	0.0433	1.2000e-004	0.0105	6.0000e-005	0.0106	2.7800e-003	6.0000e-005	2.8400e-003	0.0000	8.5423	8.5423	3.8000e-004	0.0000	8.5502
Total	**9.1900e-003**	**0.0717**	**0.1254**	**3.0000e-004**	**0.0158**	**1.3000e-003**	**0.0171**	**4.2900e-003**	**1.2000e-003**	**5.4900e-003**	**0.0000**	**24.4632**	**24.4632**	**4.8000e-004**	**0.0000**	**24.4733**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1143	0.9341	0.7354	1.1400e-003		0.0601	0.0601		0.0571	0.0571	0.0000	99.1702	99.1702	0.0216	0.0000	99.6231
Total	**0.1143**	**0.9341**	**0.7354**	**1.1400e-003**		**0.0601**	**0.0601**		**0.0571**	**0.0571**	**0.0000**	**99.1702**	**99.1702**	**0.0216**	**0.0000**	**99.6231**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4500e-003	0.0686	0.0877	2.0000e-004	5.8600e-003	1.3000e-003	7.1600e-003	1.6800e-003	1.2000e-003	2.8700e-003	0.0000	17.4147	17.4147	1.1000e-004	0.0000	17.4171
Worker	2.9200e-003	4.3200e-003	0.0434	1.3000e-004	0.0117	7.0000e-005	0.0117	3.1000e-003	7.0000e-005	3.1700e-003	0.0000	9.1479	9.1479	3.9000e-004	0.0000	9.1561
Total	**9.3700e-003**	**0.0729**	**0.1311**	**3.3000e-004**	**0.0175**	**1.3700e-003**	**0.0189**	**4.7800e-003**	**1.2700e-003**	**6.0400e-003**	**0.0000**	**26.5626**	**26.5626**	**5.0000e-004**	**0.0000**	**26.5732**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1143	0.9341	0.7354	1.1400e-003		0.0601	0.0601		0.0571	0.0571	0.0000	99.1700	99.1700	0.0216	0.0000	99.6230
Total	**0.1143**	**0.9341**	**0.7354**	**1.1400e-003**		**0.0601**	**0.0601**		**0.0571**	**0.0571**	**0.0000**	**99.1700**	**99.1700**	**0.0216**	**0.0000**	**99.6230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4500e-003	0.0686	0.0877	2.0000e-004	5.8600e-003	1.3000e-003	7.1600e-003	1.6800e-003	1.2000e-003	2.8700e-003	0.0000	17.4147	17.4147	1.1000e-004	0.0000	17.4171
Worker	2.9200e-003	4.3200e-003	0.0434	1.3000e-004	0.0117	7.0000e-005	0.0117	3.1000e-003	7.0000e-005	3.1700e-003	0.0000	9.1479	9.1479	3.9000e-004	0.0000	9.1561
Total	**9.3700e-003**	**0.0729**	**0.1311**	**3.3000e-004**	**0.0175**	**1.3700e-003**	**0.0189**	**4.7800e-003**	**1.2700e-003**	**6.0400e-003**	**0.0000**	**26.5626**	**26.5626**	**5.0000e-004**	**0.0000**	**26.5732**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2897					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0299	0.2006	0.1854	3.0000e-004		0.0151	0.0151		0.0151	0.0151	0.0000	25.5326	25.5326	2.4300e-003	0.0000	25.5835
Total	**0.3196**	**0.2006**	**0.1854**	**3.0000e-004**		**0.0151**	**0.0151**		**0.0151**	**0.0151**	**0.0000**	**25.5326**	**25.5326**	**2.4300e-003**	**0.0000**	**25.5835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	1.0200e-003	0.0102	3.0000e-005	2.7500e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.1535	2.1535	9.0000e-005	0.0000	2.1554
Total	**6.9000e-004**	**1.0200e-003**	**0.0102**	**3.0000e-005**	**2.7500e-003**	**2.0000e-005**	**2.7600e-003**	**7.3000e-004**	**2.0000e-005**	**7.5000e-004**	**0.0000**	**2.1535**	**2.1535**	**9.0000e-005**	**0.0000**	**2.1554**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2897					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0299	0.2006	0.1854	3.0000e-004		0.0151	0.0151		0.0151	0.0151	0.0000	25.5326	25.5326	2.4300e-003	0.0000	25.5835
Total	**0.3196**	**0.2006**	**0.1854**	**3.0000e-004**		**0.0151**	**0.0151**		**0.0151**	**0.0151**	**0.0000**	**25.5326**	**25.5326**	**2.4300e-003**	**0.0000**	**25.5835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	1.0200e-003	0.0102	3.0000e-005	2.7500e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.1535	2.1535	9.0000e-005	0.0000	2.1554
Total	**6.9000e-004**	**1.0200e-003**	**0.0102**	**3.0000e-005**	**2.7500e-003**	**2.0000e-005**	**2.7600e-003**	**7.3000e-004**	**2.0000e-005**	**7.5000e-004**	**0.0000**	**2.1535**	**2.1535**	**9.0000e-005**	**0.0000**	**2.1554**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0282	0.3004	0.2537	3.9000e-004		0.0164	0.0164		0.0151	0.0151	0.0000	35.6453	35.6453	0.0111	0.0000	35.8783
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0282**	**0.3004**	**0.2537**	**3.9000e-004**		**0.0164**	**0.0164**		**0.0151**	**0.0151**	**0.0000**	**35.6453**	**35.6453**	**0.0111**	**0.0000**	**35.8783**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	1.1400e-003	0.0114	3.0000e-005	3.0800e-003	2.0000e-005	3.1000e-003	8.2000e-004	2.0000e-005	8.3000e-004	0.0000	2.4119	2.4119	1.0000e-004	0.0000	2.4140
Total	**7.7000e-004**	**1.1400e-003**	**0.0114**	**3.0000e-005**	**3.0800e-003**	**2.0000e-005**	**3.1000e-003**	**8.2000e-004**	**2.0000e-005**	**8.3000e-004**	**0.0000**	**2.4119**	**2.4119**	**1.0000e-004**	**0.0000**	**2.4140**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0282	0.3004	0.2537	3.9000e-004		0.0164	0.0164		0.0151	0.0151	0.0000	35.6453	35.6453	0.0111	0.0000	35.8783
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0282**	**0.3004**	**0.2537**	**3.9000e-004**		**0.0164**	**0.0164**		**0.0151**	**0.0151**	**0.0000**	**35.6453**	**35.6453**	**0.0111**	**0.0000**	**35.8783**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	1.1400e-003	0.0114	3.0000e-005	3.0800e-003	2.0000e-005	3.1000e-003	8.2000e-004	2.0000e-005	8.3000e-004	0.0000	2.4119	2.4119	1.0000e-004	0.0000	2.4140
Total	**7.7000e-004**	**1.1400e-003**	**0.0114**	**3.0000e-005**	**3.0800e-003**	**2.0000e-005**	**3.1000e-003**	**8.2000e-004**	**2.0000e-005**	**8.3000e-004**	**0.0000**	**2.4119**	**2.4119**	**1.0000e-004**	**0.0000**	**2.4140**

RCH Expansion Project Phase IIb Operations

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	600.00	Bed	9.86	962,950.00	0
Hospital	241.01	1000sqft	5.53	241,006.00	0
Medical Office Building	345.39	1000sqft	7.93	345,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2030
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365

tblLandUse	LandUseSquareFeet	241,010.00	241,006.00
tblLandUse	LandUseSquareFeet	429,454.55	962,950.00
tblLandUse	LandUseSquareFeet	345,390.00	345,392.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	40.5254	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Energy	5.3062	48.2382	40.5201	0.2894		3.6661	3.6661		3.6661	3.6661		57,885.7836	57,885.7836	1.1095	1.0612	58,238.0668
Mobile	52.2340	128.7698	554.6824	2.4270	174.4986	3.6929	178.1915	46.5590	3.4056	49.9647		175,439.9886	175,439.9886	4.1926		175,528.0342
Total	**98.0656**	**177.0090**	**595.3230**	**2.7164**	**174.4986**	**7.3594**	**181.8580**	**46.5590**	**7.0721**	**53.6312**		**233,326.0318**	**233,326.0318**	**5.3028**	**1.0612**	**233,766.3747**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	40.5254	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Energy	5.3062	48.2382	40.5201	0.2894		3.6661	3.6661		3.6661	3.6661		57,885.7836	57,885.7836	1.1095	1.0612	58,238.0668
Mobile	47.9555	100.8350	456.7784	1.7981	128.0260	2.7811	130.8071	34.1594	2.5651	36.7245		129,968.8103	129,968.8103	3.1591		130,035.1522
Total	**93.7871**	**149.0743**	**497.4190**	**2.0876**	**128.0260**	**6.4476**	**134.4737**	**34.1594**	**6.2316**	**40.3910**		**187,854.8535**	**187,854.8535**	**4.2693**	**1.0612**	**188,273.4927**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**4.36**	**15.78**	**16.45**	**23.15**	**26.63**	**12.39**	**26.06**	**26.63**	**11.88**	**24.69**	**0.00**	**19.49**	**19.49**	**19.49**	**0.00**	**19.46**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	47.9555	100.8350	456.7784	1.7981	128.0260	2.7811	130.8071	34.1594	2.5651	36.7245		129,968.8103	129,968.8103	3.1591		130,035.1522
Unmitigated	52.2340	128.7698	554.6824	2.4270	174.4986	3.6929	178.1915	46.5590	3.4056	49.9647		175,439.9886	175,439.9886	4.1926		175,528.0342

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	2,183.55	1,503.90	1330.38	7,616,349	5,576,934
Hospital	5,436.00	3,744.00	3312.00	18,961,079	13,883,907
Hospital	2,229.34	1,376.17	1205.05	7,603,001	5,567,160
Hospital	5,550.00	3,426.00	3000.00	18,927,849	13,859,575
Medical Office Building	8,734.91	2,165.60	373.02	17,124,351	12,629,086
Total	24,133.81	12,215.66	9,220.45	70,232,629	51,516,662

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.448719	0.070012	0.183617	0.175225	0.044572	0.007195	0.011818	0.047080	0.000820	0.001060	0.005212	0.000723	0.003946

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.3062	48.2382	40.5201	0.2894		3.6661	3.6661		3.6661	3.6661		57,885.7836	57,885.7836	1.1095	1.0612	58,238.0668
NaturalGas Unmitigated	5.3062	48.2382	40.5201	0.2894		3.6661	3.6661		3.6661	3.6661		57,885.7836	57,885.7836	1.1095	1.0612	58,238.0668

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	390773	4.2142	38.3111	32.1813	0.2299		2.9116	2.9116		2.9116	2.9116		45,973.2970	45,973.2970	0.8812	0.8428	46,253.0828
Hospital	97802.2	1.0547	9.5885	8.0543	0.0575		0.7287	0.7287		0.7287	0.7287		11,506.1430	11,506.1430	0.2205	0.2110	11,576.1675
Medical Office Building	3453.92	0.0373	0.3386	0.2844	2.0300e-003		0.0257	0.0257		0.0257	0.0257		406.3435	406.3435	7.7900e-003	7.4500e-003	408.8165
Total		**5.3062**	**48.2382**	**40.5201**	**0.2894**		**3.6661**	**3.6661**		**3.6661**	**3.6661**		**57,885.7836**	**57,885.7836**	**1.1095**	**1.0612**	**58,238.0668**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	390.773	4.2142	38.3111	32.1813	0.2299		2.9116	2.9116		2.9116	2.9116		45,973.2970	45,973.2970	0.8812	0.8428	46,253.0828
Hospital	97.8022	1.0547	9.5885	8.0543	0.0575		0.7287	0.7287		0.7287	0.7287		11,506.1430	11,506.1430	0.2205	0.2110	11,576.1675
Medical Office Building	3.45392	0.0373	0.3386	0.2844	2.0300e-003		0.0257	0.0257		0.0257	0.0257		406.3435	406.3435	7.7900e-003	7.4500e-003	408.8165
Total		**5.3062**	**48.2382**	**40.5201**	**0.2894**		**3.6661**	**3.6661**		**3.6661**	**3.6661**		**57,885.7836**	**57,885.7836**	**1.1095**	**1.0612**	**58,238.0668**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	40.5254	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Unmitigated	40.5254	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.8373					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	30.6771					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0110	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Total	**40.5254**	**1.0900e-003**	**0.1205**	**1.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**		**0.2597**	**0.2597**	**6.7000e-004**		**0.2737**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.8373					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	30.6771					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0110	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Total	**40.5254**	**1.0900e-003**	**0.1205**	**1.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**		**0.2597**	**0.2597**	**6.7000e-004**		**0.2737**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Expansion Project Phase IIb Operations

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	600.00	Bed	9.86	962,950.00	0
Hospital	241.01	1000sqft	5.53	241,006.00	0
Medical Office Building	345.39	1000sqft	7.93	345,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2030
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365
tblLandUse	LandUseSquareFeet	241,010.00	241,006.00
tblLandUse	LandUseSquareFeet	429,454.55	962,950.00

tblLandUse	LandUseSquareFeet	345,390.00	345,392.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	40.5254	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Energy	5.3062	48.2382	40.5201	0.2894		3.6661	3.6661		3.6661	3.6661		57,885.7836	57,885.7836	1.1095	1.0612	58,238.0668
Mobile	53.5730	124.0723	586.1539	2.6017	174.4986	3.6824	178.1810	46.5590	3.3959	49.9550		186,889.7506	186,889.7506	4.1820		186,977.5720
Total	**99.4046**	**172.3115**	**626.7945**	**2.8911**	**174.4986**	**7.3489**	**181.8475**	**46.5590**	**7.0625**	**53.6215**		**244,775.7938**	**244,775.7938**	**5.2921**	**1.0612**	**245,215.9126**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	40.5254	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Energy	5.3062	48.2382	40.5201	0.2894		3.6661	3.6661		3.6661	3.6661		57,885.7836	57,885.7836	1.1095	1.0612	58,238.0668
Mobile	49.1333	97.4575	470.5033	1.9269	128.0260	2.7706	130.7966	34.1594	2.5554	36.7148		138,434.3263	138,434.3263	3.1485		138,500.4441
Total	**94.9649**	**145.6967**	**511.1439**	**2.2163**	**128.0260**	**6.4371**	**134.4631**	**34.1594**	**6.2219**	**40.3813**		**196,320.3695**	**196,320.3695**	**4.2586**	**1.0612**	**196,738.7846**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.47**	**15.45**	**18.45**	**23.34**	**26.63**	**12.41**	**26.06**	**26.63**	**11.90**	**24.69**	**0.00**	**19.80**	**19.80**	**19.53**	**0.00**	**19.77**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	49.1333	97.4575	470.5033	1.9269	128.0260	2.7706	130.7966	34.1594	2.5554	36.7148		138,434.3263	138,434.3263	3.1485		138,500.4441
Unmitigated	53.5730	124.0723	586.1539	2.6017	174.4986	3.6824	178.1810	46.5590	3.3959	49.9550		186,889.7506	186,889.7506	4.1820		186,977.5720

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	2,183.55	1,503.90	1330.38	7,616,349	5,576,934
Hospital	5,436.00	3,744.00	3312.00	18,961,079	13,883,907
Hospital	2,229.34	1,376.17	1205.05	7,603,001	5,567,160
Hospital	5,550.00	3,426.00	3000.00	18,927,849	13,859,575
Medical Office Building	8,734.91	2,165.60	373.02	17,124,351	12,629,086
Total	24,133.81	12,215.66	9,220.45	70,232,629	51,516,662

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.448719	0.070012	0.183617	0.175225	0.044572	0.007195	0.011818	0.047080	0.000820	0.001060	0.005212	0.000723	0.003946

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.3062	48.2382	40.5201	0.2894		3.6661	3.6661		3.6661	3.6661		57,885.7836	57,885.7836	1.1095	1.0612	58,238.0668
NaturalGas Unmitigated	5.3062	48.2382	40.5201	0.2894		3.6661	3.6661		3.6661	3.6661		57,885.7836	57,885.7836	1.1095	1.0612	58,238.0668

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	390773	4.2142	38.3111	32.1813	0.2299		2.9116	2.9116		2.9116	2.9116		45,973.2970	45,973.2970	0.8812	0.8428	46,253.0828
Hospital	97802.2	1.0547	9.5885	8.0543	0.0575		0.7287	0.7287		0.7287	0.7287		11,506.1430	11,506.1430	0.2205	0.2110	11,576.1675
Medical Office Building	3453.92	0.0373	0.3386	0.2844	2.0300e-003		0.0257	0.0257		0.0257	0.0257		406.3435	406.3435	7.7900e-003	7.4500e-003	408.8165
Total		**5.3062**	**48.2382**	**40.5201**	**0.2894**		**3.6661**	**3.6661**		**3.6661**	**3.6661**		**57,885.7836**	**57,885.7836**	**1.1095**	**1.0612**	**58,238.0668**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	97.8022	1.0547	9.5885	8.0543	0.0575		0.7287	0.7287		0.7287	0.7287		11,506.1430	11,506.1430	0.2205	0.2110	11,576.1675
Medical Office Building	3.45392	0.0373	0.3386	0.2844	2.0300e-003		0.0257	0.0257		0.0257	0.0257		406.3435	406.3435	7.7900e-003	7.4500e-003	408.8165
Hospital	390.773	4.2142	38.3111	32.1813	0.2299		2.9116	2.9116		2.9116	2.9116		45,973.2970	45,973.2970	0.8812	0.8428	46,253.0828
Total		**5.3062**	**48.2382**	**40.5201**	**0.2894**		**3.6661**	**3.6661**		**3.6661**	**3.6661**		**57,885.7836**	**57,885.7836**	**1.1095**	**1.0612**	**58,238.0668**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	40.5254	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Unmitigated	40.5254	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.8373					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	30.6771					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0110	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Total	**40.5254**	**1.0900e-003**	**0.1205**	**1.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**		**0.2597**	**0.2597**	**6.7000e-004**		**0.2737**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.8373					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	30.6771					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0110	1.0900e-003	0.1205	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		0.2597	0.2597	6.7000e-004		0.2737
Total	**40.5254**	**1.0900e-003**	**0.1205**	**1.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**		**0.2597**	**0.2597**	**6.7000e-004**		**0.2737**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Expansion Project Phase IIb Operations

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	600.00	Bed	9.86	962,950.00	0
Hospital	241.01	1000sqft	5.53	241,006.00	0
Medical Office Building	345.39	1000sqft	7.93	345,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2030
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365

tblLandUse	LandUseSquareFeet	241,010.00	241,006.00
tblLandUse	LandUseSquareFeet	429,454.55	962,950.00
tblLandUse	LandUseSquareFeet	345,390.00	345,392.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.3959	2.0000e-004	0.0220	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0430	0.0430	1.1000e-004	0.0000	0.0453
Energy	0.9684	8.8035	7.3949	0.0528		0.6691	0.6691		0.6691	0.6691	0.0000	34,412.5869	34,412.5869	0.7269	0.2881	34,517.1548
Mobile	7.6682	20.4075	88.1876	0.3803	26.6384	0.5710	27.2094	7.1171	0.5266	7.6436	0.0000	24,911.5040	24,911.5040	0.5882	0.0000	24,923.8557
Waste						0.0000	0.0000		0.0000	0.0000	1,641.2063	0.0000	1,641.2063	96.9925	0.0000	3,678.0491
Water						0.0000	0.0000		0.0000	0.0000	45.0991	1,160.2399	1,205.3390	0.1806	0.1033	1,241.1631
Total	**16.0325**	**29.2111**	**95.6045**	**0.4331**	**26.6384**	**1.2401**	**27.8785**	**7.1171**	**1.1957**	**8.3128**	**1,686.3054**	**60,484.3738**	**62,170.6792**	**98.4883**	**0.3914**	**64,360.2680**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.3959	2.0000e-004	0.0220	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0430	0.0430	1.1000e-004	0.0000	0.0453
Energy	0.9684	8.8035	7.3949	0.0528		0.6691	0.6691		0.6691	0.6691	0.0000	34,412.5869	34,412.5869	0.7269	0.2881	34,517.1548
Mobile	6.9972	15.9666	72.4948	0.2817	19.5396	0.4296	19.9692	5.2205	0.3962	5.6167	0.0000	18,451.9928	18,451.9928	0.4427	0.0000	18,461.2904
Waste						0.0000	0.0000		0.0000	0.0000	1,641.2063	0.0000	1,641.2063	96.9925	0.0000	3,678.0491
Water						0.0000	0.0000		0.0000	0.0000	45.0991	1,160.2399	1,205.3390	0.1798	0.1032	1,241.0912
Total	**15.3615**	**24.7703**	**79.9117**	**0.3345**	**19.5396**	**1.0987**	**20.6383**	**5.2205**	**1.0653**	**6.2858**	**1,686.3054**	**54,024.8626**	**55,711.1680**	**98.3420**	**0.3912**	**57,897.6308**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.19**	**15.20**	**16.41**	**22.77**	**26.65**	**11.40**	**25.97**	**26.65**	**10.90**	**24.38**	**0.00**	**10.68**	**10.39**	**0.15**	**0.05**	**10.04**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Ride Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.9972	15.9666	72.4948	0.2817	19.5396	0.4296	19.9692	5.2205	0.3962	5.6167	0.0000	18,451.9928	18,451.9928	0.4427	0.0000	18,461.2904
Unmitigated	7.6682	20.4075	88.1876	0.3803	26.6384	0.5710	27.2094	7.1171	0.5266	7.6436	0.0000	24,911.5040	24,911.5040	0.5882	0.0000	24,923.8557

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	2,183.55	1,503.90	1330.38	7,616,349	5,576,934
Hospital	5,436.00	3,744.00	3312.00	18,961,079	13,883,907
Hospital	2,229.34	1,376.17	1205.05	7,603,001	5,567,160
Hospital	5,550.00	3,426.00	3000.00	18,927,849	13,859,575
Medical Office Building	8,734.91	2,165.60	373.02	17,124,351	12,629,086
Total	24,133.81	12,215.66	9,220.45	70,232,629	51,516,662

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.448719	0.070012	0.183617	0.175225	0.044572	0.007195	0.011818	0.047080	0.000820	0.001060	0.005212	0.000723	0.003946

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24,828.9463	24,828.9463	0.5432	0.1124	24,875.1897
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24,828.9463	24,828.9463	0.5432	0.1124	24,875.1897
NaturalGas Mitigated	0.9684	8.8035	7.3949	0.0528		0.6691	0.6691		0.6691	0.6691	0.0000	9,583.6407	9,583.6407	0.1837	0.1757	9,641.9651
NaturalGas Unmitigated	0.9684	8.8035	7.3949	0.0528		0.6691	0.6691		0.6691	0.6691	0.0000	9,583.6407	9,583.6407	0.1837	0.1757	9,641.9651

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	1.42632e+008	0.7691	6.9918	5.8731	0.0420		0.5314	0.5314		0.5314	0.5314	0.0000	7,611.3949	7,611.3949	0.1459	0.1395	7,657.7166
Hospital	3.56978e+007	0.1925	1.7499	1.4699	0.0105		0.1330	0.1330		0.1330	0.1330	0.0000	1,904.9710	1,904.9710	0.0365	0.0349	1,916.5644
Medical Office Building	1.26068e+006	6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.2747	67.2747	1.2900e-003	1.2300e-003	67.6842
Total		**0.9684**	**8.8035**	**7.3949**	**0.0528**		**0.6691**	**0.6691**		**0.6691**	**0.6691**	**0.0000**	**9,583.6407**	**9,583.6407**	**0.1837**	**0.1757**	**9,641.9651**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Medical Office Building	1.26068e+006	6.8000e-003	0.0618	0.0519	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.2747	67.2747	1.2900e-003	1.2300e-003	67.6842
Hospital	1.42632e+008	0.7691	6.9918	5.8731	0.0420		0.5314	0.5314		0.5314	0.5314	0.0000	7,611.3949	7,611.3949	0.1459	0.1395	7,657.7166
Hospital	3.56978e+007	0.1925	1.7499	1.4699	0.0105		0.1330	0.1330		0.1330	0.1330	0.0000	1,904.9710	1,904.9710	0.0365	0.0349	1,916.5644
Total		**0.9684**	**8.8035**	**7.3949**	**0.0528**		**0.6691**	**0.6691**		**0.6691**	**0.6691**	**0.0000**	**9,583.6407**	**9,583.6407**	**0.1837**	**0.1757**	**9,641.9651**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	3.00729e+007	18,082.9940	0.3956	0.0819	18,116.6733
Hospital	7.52662e+006	4,525.7906	0.0990	0.0205	4,534.2198
Medical Office Building	3.69224e+006	2,220.1617	0.0486	0.0101	2,224.2967
Total		**24,828.9463**	**0.5432**	**0.1124**	**24,875.1897**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	3.00729e+007	18,082.9940	0.3956	0.0819	18,116.6733
Hospital	7.52662e+006	4,525.7906	0.0990	0.0205	4,534.2198
Medical Office Building	3.69224e+006	2,220.1617	0.0486	0.0101	2,224.2967
Total		**24,828.9463**	**0.5432**	**0.1124**	**24,875.1897**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.3959	2.0000e-004	0.0220	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0430	0.0430	1.1000e-004	0.0000	0.0453
Unmitigated	7.3959	2.0000e-004	0.0220	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0430	0.0430	1.1000e-004	0.0000	0.0453

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.5986					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0100e-003	2.0000e-004	0.0220	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0430	0.0430	1.1000e-004	0.0000	0.0453
Total	**7.3959**	**2.0000e-004**	**0.0220**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0430**	**0.0430**	**1.1000e-004**	**0.0000**	**0.0453**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.5986					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0100e-003	2.0000e-004	0.0220	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0430	0.0430	1.1000e-004	0.0000	0.0453
Total	**7.3959**	**2.0000e-004**	**0.0220**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0430**	**0.0430**	**1.1000e-004**	**0.0000**	**0.0453**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,205.3390	0.1798	0.1032	1,241.0912
Unmitigated	1,205.3390	0.1806	0.1033	1,241.1631

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	30.2421 / 5.76039	285.9649	0.0429	0.0245	294.4641
Hospital	53.8882 / 10.2644	509.5595	0.0764	0.0437	524.7042
Medical Office Building	43.3397 / 8.25519	409.8146	0.0614	0.0351	421.9948
Total		**1,205.3390**	**0.1806**	**0.1033**	**1,241.1631**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	30.2421 / 5.76039	285.9649	0.0427	0.0245	294.4471
Hospital	53.8882 / 10.2644	509.5595	0.0760	0.0436	524.6738
Medical Office Building	43.3397 / 8.25519	409.8146	0.0611	0.0351	421.9703
Total		**1,205.3390**	**0.1798**	**0.1032**	**1,241.0912**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,641.2063	96.9925	0.0000	3,678.0491
Unmitigated	1,641.2063	96.9925	0.0000	3,678.0491

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1752	355.6402	21.0177	0.0000	797.0125
Hospital	2602.91	528.3672	31.2256	0.0000	1,184.1050
Medical Office Building	3730.21	757.1989	44.7492	0.0000	1,696.9316
Total		**1,641.2063**	**96.9925**	**0.0000**	**3,678.0491**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1752	355.6402	21.0177	0.0000	797.0125
Hospital	2602.91	528.3672	31.2256	0.0000	1,184.1050
Medical Office Building	3730.21	757.1989	44.7492	0.0000	1,696.9316
Total		**1,641.2063**	**96.9925**	**0.0000**	**3,678.0491**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Expansion Project Phase IIb Construction

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	377.00	Bed	6.19	600,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2030
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - 600,000 sq ft hospital bed tower

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	20.00	140.00
tblConstructionPhase	NumDays	230.00	650.00
tblConstructionPhase	NumDays	20.00	145.00
tblConstructionPhase	NumDays	20.00	90.00
tblConstructionPhase	PhaseEndDate	3/13/2028	8/20/2027

tblConstructionPhase	PhaseEndDate	12/24/2027	12/10/2027
tblConstructionPhase	PhaseStartDate	8/31/2027	2/8/2027
tblConstructionPhase	PhaseStartDate	8/21/2027	8/9/2027
tblGrading	MaterialExported	0.00	32,917.00
tblLandUse	LandUseSquareFeet	269,840.61	600,000.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblTripsAndVMT	HaulingTripNumber	897.00	278.00
tblTripsAndVMT	HaulingTripNumber	4,115.00	4,114.00
tblTripsAndVMT	WorkerTripNumber	192.00	23.00
tblTripsAndVMT	WorkerTripNumber	38.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.8725	16.3306	20.5652	0.0339	1.5495	0.7471	2.2966	0.2580	0.6900	0.9479	0.0000	3,198.3082	3,198.3082	0.9340	0.0000	3,217.9223
2025	3.9062	35.5776	51.7572	0.1734	9.0122	1.5196	10.5317	3.5991	1.3980	4.9972	0.0000	16,340.2974	16,340.2974	0.9531	0.0000	16,360.3117
2026	1.8529	15.2581	23.1575	0.0490	0.8733	0.6007	1.4739	0.2441	0.5635	0.8077	0.0000	4,539.8762	4,539.8762	0.5903	0.0000	4,552.2716
2027	27.5677	22.3925	35.4812	0.0700	1.0410	0.9413	1.9823	0.2886	0.8852	1.1738	0.0000	6,494.2963	6,494.2963	1.0371	0.0000	6,516.0757

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.8725	16.3306	20.5652	0.0339	0.7281	0.7471	1.4752	0.1336	0.6900	0.8236	0.0000	3,198.3082	3,198.3082	0.9340	0.0000	3,217.9223
2025	3.9062	35.5776	51.7572	0.1734	5.8065	1.5196	7.3260	2.0305	1.3980	3.4285	0.0000	16,340.2974	16,340.2974	0.9531	0.0000	16,360.3117
2026	1.8529	15.2581	23.1575	0.0490	0.8733	0.6007	1.4739	0.2441	0.5635	0.8077	0.0000	4,539.8762	4,539.8762	0.5903	0.0000	4,552.2716
2027	27.5677	22.3925	35.4812	0.0700	1.0410	0.9413	1.9823	0.2886	0.8852	1.1738	0.0000	6,494.2963	6,494.2963	1.0371	0.0000	6,516.0757

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.28**	**0.00**	**24.73**	**38.57**	**0.00**	**21.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/26/2024	1/14/2025	5	145	
2	Grading	Grading	1/15/2025	2/11/2025	5	20	
3	Trenching	Trenching	2/12/2025	3/3/2025	5	14	
4	Building Construction	Building Construction	3/4/2025	8/30/2027	5	650	
5	Architectural Coating	Architectural Coating	2/8/2027	8/20/2027	5	140	
6	Paving	Paving	8/9/2027	12/10/2027	5	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 900,000; Non-Residential Outdoor: 300,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Building Construction	Cranes	2	4.00	226	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	98.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3465	0.0000	1.3465	0.2039	0.0000	0.2039			0.0000			0.0000
Off-Road	1.8196	16.0835	19.8548	0.0307		0.7377	0.7377		0.6813	0.6813		2,949.4845	2,949.4845	0.9286		2,968.9856
Total	**1.8196**	**16.0835**	**19.8548**	**0.0307**	**1.3465**	**0.7377**	**2.0842**	**0.2039**	**0.6813**	**0.8852**		**2,949.4845**	**2,949.4845**	**0.9286**		**2,968.9856**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0225	0.2080	0.3099	1.3400e-003	0.0353	8.3400e-003	0.0437	9.6200e-003	7.6800e-003	0.0173		126.3237	126.3237	8.0000e-004		126.3404
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0304	0.0391	0.4005	1.8400e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		122.5000	122.5000	4.5800e-003		122.5962
Total	**0.0529**	**0.2471**	**0.7104**	**3.1800e-003**	**0.2030**	**9.3800e-003**	**0.2124**	**0.0541**	**8.6400e-003**	**0.0627**		**248.8237**	**248.8237**	**5.3800e-003**		**248.9366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5251	0.0000	0.5251	0.0795	0.0000	0.0795			0.0000			0.0000
Off-Road	1.8196	16.0835	19.8548	0.0307		0.7377	0.7377		0.6813	0.6813	0.0000	2,949.4845	2,949.4845	0.9286		2,968.9856
Total	**1.8196**	**16.0835**	**19.8548**	**0.0307**	**0.5251**	**0.7377**	**1.2628**	**0.0795**	**0.6813**	**0.7608**	**0.0000**	**2,949.4845**	**2,949.4845**	**0.9286**		**2,968.9856**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0225	0.2080	0.3099	1.3400e-003	0.0353	8.3400e-003	0.0437	9.6200e-003	7.6800e-003	0.0173		126.3237	126.3237	8.0000e-004		126.3404
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0304	0.0391	0.4005	1.8400e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		122.5000	122.5000	4.5800e-003		122.5962
Total	**0.0529**	**0.2471**	**0.7104**	**3.1800e-003**	**0.2030**	**9.3800e-003**	**0.2124**	**0.0541**	**8.6400e-003**	**0.0627**		**248.8237**	**248.8237**	**5.3800e-003**		**248.9366**

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3465	0.0000	1.3465	0.2039	0.0000	0.2039			0.0000			0.0000
Off-Road	1.6450	13.7428	18.4921	0.0307		0.6239	0.6239		0.5766	0.5766		2,948.8920	2,948.8920	0.9284		2,968.3891
Total	**1.6450**	**13.7428**	**18.4921**	**0.0307**	**1.3465**	**0.6239**	**1.9704**	**0.2039**	**0.5766**	**0.7805**		**2,948.8920**	**2,948.8920**	**0.9284**		**2,968.3891**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0224	0.2073	0.3080	1.3400e-003	0.3757	8.3900e-003	0.3840	0.0932	7.7200e-003	0.1009		126.3080	126.3080	8.0000e-004		126.3248
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0374	0.3840	1.8400e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		121.1185	121.1185	4.4400e-003		121.2118
Total	**0.0514**	**0.2447**	**0.6920**	**3.1800e-003**	**0.5433**	**9.4400e-003**	**0.5528**	**0.1376**	**8.6900e-003**	**0.1463**		**247.4265**	**247.4265**	**5.2400e-003**		**247.5366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5251	0.0000	0.5251	0.0795	0.0000	0.0795			0.0000			0.0000
Off-Road	1.6450	13.7428	18.4921	0.0307		0.6239	0.6239		0.5766	0.5766	0.0000	2,948.8920	2,948.8920	0.9284		2,968.3891
Total	**1.6450**	**13.7428**	**18.4921**	**0.0307**	**0.5251**	**0.6239**	**1.1490**	**0.0795**	**0.5766**	**0.6561**	**0.0000**	**2,948.8920**	**2,948.8920**	**0.9284**		**2,968.3891**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0224	0.2073	0.3080	1.3400e-003	0.3757	8.3900e-003	0.3840	0.0932	7.7200e-003	0.1009		126.3080	126.3080	8.0000e-004		126.3248
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0374	0.3840	1.8400e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		121.1185	121.1185	4.4400e-003		121.2118
Total	**0.0514**	**0.2447**	**0.6920**	**3.1800e-003**	**0.5433**	**9.4400e-003**	**0.5528**	**0.1376**	**8.6900e-003**	**0.1463**		**247.4265**	**247.4265**	**5.2400e-003**		**247.5366**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.2552	0.0000	5.2552	2.5715	0.0000	2.5715			0.0000			0.0000
Off-Road	1.4764	13.2944	18.3233	0.0276		0.6183	0.6183		0.5689	0.5689		2,667.6463	2,667.6463	0.8628		2,685.7645
Total	**1.4764**	**13.2944**	**18.3233**	**0.0276**	**5.2552**	**0.6183**	**5.8736**	**2.5715**	**0.5689**	**3.1403**		**2,667.6463**	**2,667.6463**	**0.8628**		**2,685.7645**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4008	22.2458	33.0500	0.1440	3.5893	0.9002	4.4895	0.9832	0.8282	1.8114		13,551.5327	13,551.5327	0.0858		13,553.3354
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0374	0.3840	1.8400e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		121.1185	121.1185	4.4400e-003		121.2118
Total	**2.4298**	**22.2832**	**33.4340**	**0.1459**	**3.7569**	**0.9013**	**4.6582**	**1.0277**	**0.8292**	**1.8568**		**13,672.6512**	**13,672.6512**	**0.0903**		**13,674.5472**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0495	0.0000	2.0495	1.0029	0.0000	1.0029			0.0000			0.0000
Off-Road	1.4764	13.2944	18.3233	0.0276		0.6183	0.6183		0.5689	0.5689	0.0000	2,667.6463	2,667.6463	0.8628		2,685.7645
Total	**1.4764**	**13.2944**	**18.3233**	**0.0276**	**2.0495**	**0.6183**	**2.6679**	**1.0029**	**0.5689**	**1.5717**	**0.0000**	**2,667.6463**	**2,667.6463**	**0.8628**		**2,685.7645**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4008	22.2458	33.0500	0.1440	3.5893	0.9002	4.4895	0.9832	0.8282	1.8114		13,551.5327	13,551.5327	0.0858		13,553.3354
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0291	0.0374	0.3840	1.8400e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		121.1185	121.1185	4.4400e-003		121.2118
Total	**2.4298**	**22.2832**	**33.4340**	**0.1459**	**3.7569**	**0.9013**	**4.6582**	**1.0277**	**0.8292**	**1.8568**		**13,672.6512**	**13,672.6512**	**0.0903**		**13,674.5472**

3.4 Trenching - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3035	2.5877	5.5716	8.4200e-003		0.1155	0.1155		0.1063	0.1063		815.0605	815.0605	0.2636		820.5963
Total	**0.3035**	**2.5877**	**5.5716**	**8.4200e-003**		**0.1155**	**0.1155**		**0.1063**	**0.1063**		**815.0605**	**815.0605**	**0.2636**		**820.5963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.6800e-003	0.0125	0.1280	6.1000e-004	0.0559	3.5000e-004	0.0562	0.0148	3.2000e-004	0.0152		40.3728	40.3728	1.4800e-003		40.4039
Total	**9.6800e-003**	**0.0125**	**0.1280**	**6.1000e-004**	**0.0559**	**3.5000e-004**	**0.0562**	**0.0148**	**3.2000e-004**	**0.0152**		**40.3728**	**40.3728**	**1.4800e-003**		**40.4039**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3035	2.5877	5.5716	8.4200e-003		0.1155	0.1155		0.1063	0.1063	0.0000	815.0605	815.0605	0.2636		820.5963
Total	**0.3035**	**2.5877**	**5.5716**	**8.4200e-003**		**0.1155**	**0.1155**		**0.1063**	**0.1063**	**0.0000**	**815.0605**	**815.0605**	**0.2636**		**820.5963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.6800e-003	0.0125	0.1280	6.1000e-004	0.0559	3.5000e-004	0.0562	0.0148	3.2000e-004	0.0152		40.3728	40.3728	1.4800e-003		40.4039
Total	**9.6800e-003**	**0.0125**	**0.1280**	**6.1000e-004**	**0.0559**	**3.5000e-004**	**0.0562**	**0.0148**	**3.2000e-004**	**0.0152**		**40.3728**	**40.3728**	**1.4800e-003**		**40.4039**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688		2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**		**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5113	3.3219	7.5724	0.0202	0.6161	0.1057	0.7218	0.1759	0.0972	0.2732		1,890.1950	1,890.1950	0.0122		1,890.4513
Worker	0.0446	0.0573	0.5887	2.8200e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4900e-003	0.0697		185.7150	185.7150	6.8100e-003		185.8581
Total	**0.5559**	**3.3792**	**8.1612**	**0.0230**	**0.8732**	**0.1073**	**0.9805**	**0.2441**	**0.0987**	**0.3428**		**2,075.9099**	**2,075.9099**	**0.0190**		**2,076.3094**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688	0.0000	2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**	**0.0000**	**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5113	3.3219	7.5724	0.0202	0.6161	0.1057	0.7218	0.1759	0.0972	0.2732		1,890.1950	1,890.1950	0.0122		1,890.4513
Worker	0.0446	0.0573	0.5887	2.8200e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4900e-003	0.0697		185.7150	185.7150	6.8100e-003		185.8581
Total	**0.5559**	**3.3792**	**8.1612**	**0.0230**	**0.8732**	**0.1073**	**0.9805**	**0.2441**	**0.0987**	**0.3428**		**2,075.9099**	**2,075.9099**	**0.0190**		**2,076.3094**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688		2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**		**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4973	3.2245	7.4598	0.0202	0.6162	0.1014	0.7176	0.1760	0.0933	0.2692		1,889.7649	1,889.7649	0.0119		1,890.0142
Worker	0.0427	0.0551	0.5673	2.8200e-003	0.2571	1.6200e-003	0.2587	0.0682	1.5100e-003	0.0697		183.9103	183.9103	6.6400e-003		184.0496
Total	**0.5400**	**3.2796**	**8.0271**	**0.0230**	**0.8733**	**0.1030**	**0.9763**	**0.2441**	**0.0948**	**0.3389**		**2,073.6752**	**2,073.6752**	**0.0185**		**2,074.0638**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688	0.0000	2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**	**0.0000**	**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4973	3.2245	7.4598	0.0202	0.6162	0.1014	0.7176	0.1760	0.0933	0.2692		1,889.7649	1,889.7649	0.0119		1,890.0142
Worker	0.0427	0.0551	0.5673	2.8200e-003	0.2571	1.6200e-003	0.2587	0.0682	1.5100e-003	0.0697		183.9103	183.9103	6.6400e-003		184.0496
Total	**0.5400**	**3.2796**	**8.0271**	**0.0230**	**0.8733**	**0.1030**	**0.9763**	**0.2441**	**0.0948**	**0.3389**		**2,073.6752**	**2,073.6752**	**0.0185**		**2,074.0638**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688		2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**		**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4940	3.2017	7.4334	0.0202	0.6162	0.1017	0.7179	0.1760	0.0935	0.2695		1,889.8350	1,889.8350	0.0119		1,890.0848
Worker	0.0410	0.0531	0.5485	2.8200e-003	0.2571	1.6400e-003	0.2587	0.0682	1.5200e-003	0.0697		182.3625	182.3625	6.4800e-003		182.4985
Total	**0.5350**	**3.2548**	**7.9819**	**0.0230**	**0.8733**	**0.1033**	**0.9766**	**0.2442**	**0.0950**	**0.3392**		**2,072.1974**	**2,072.1974**	**0.0184**		**2,072.5832**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688	0.0000	2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**	**0.0000**	**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4940	3.2017	7.4334	0.0202	0.6162	0.1017	0.7179	0.1760	0.0935	0.2695		1,889.8350	1,889.8350	0.0119		1,890.0848
Worker	0.0410	0.0531	0.5485	2.8200e-003	0.2571	1.6400e-003	0.2587	0.0682	1.5200e-003	0.0697		182.3625	182.3625	6.4800e-003		182.4985
Total	**0.5350**	**3.2548**	**7.9819**	**0.0230**	**0.8733**	**0.1033**	**0.9766**	**0.2442**	**0.0950**	**0.3392**		**2,072.1974**	**2,072.1974**	**0.0184**		**2,072.5832**

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.8304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030		562.8961	562.8961	0.0307		563.5409
Total	**25.1721**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**		**562.8961**	**562.8961**	**0.0307**		**563.5409**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	8.9200e-003	0.0115	0.1192	6.1000e-004	0.0559	3.6000e-004	0.0562	0.0148	3.3000e-004	0.0152		39.6440	39.6440	1.4100e-003		39.6736
Total	**8.9200e-003**	**0.0115**	**0.1192**	**6.1000e-004**	**0.0559**	**3.6000e-004**	**0.0562**	**0.0148**	**3.3000e-004**	**0.0152**		**39.6440**	**39.6440**	**1.4100e-003**		**39.6736**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.8304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030	0.0000	562.8961	562.8961	0.0307		563.5409
Total	**25.1721**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.5409**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	8.9200e-003	0.0115	0.1192	6.1000e-004	0.0559	3.6000e-004	0.0562	0.0148	3.3000e-004	0.0152		39.6440	39.6440	1.4100e-003		39.6736
Total	**8.9200e-003**	**0.0115**	**0.1192**	**6.1000e-004**	**0.0559**	**3.6000e-004**	**0.0562**	**0.0148**	**3.3000e-004**	**0.0152**		**39.6440**	**39.6440**	**1.4100e-003**		**39.6736**

3.7 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5210	4.8335	8.3930	0.0132		0.2363	0.2363		0.2174	0.2174		1,274.0698	1,274.0698	0.4121		1,282.7230
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5210**	**4.8335**	**8.3930**	**0.0132**		**0.2363**	**0.2363**		**0.2174**	**0.2174**		**1,274.0698**	**1,274.0698**	**0.4121**		**1,282.7230**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0178	0.0231	0.2385	1.2300e-003	0.1118	7.1000e-004	0.1125	0.0296	6.6000e-004	0.0303		79.2880	79.2880	2.8200e-003		79.3472
Total	**0.0178**	**0.0231**	**0.2385**	**1.2300e-003**	**0.1118**	**7.1000e-004**	**0.1125**	**0.0296**	**6.6000e-004**	**0.0303**		**79.2880**	**79.2880**	**2.8200e-003**		**79.3472**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5210	4.8335	8.3930	0.0132		0.2363	0.2363		0.2174	0.2174	0.0000	1,274.0698	1,274.0698	0.4121		1,282.7230
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5210**	**4.8335**	**8.3930**	**0.0132**		**0.2363**	**0.2363**		**0.2174**	**0.2174**	**0.0000**	**1,274.0698**	**1,274.0698**	**0.4121**		**1,282.7230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0178	0.0231	0.2385	1.2300e-003	0.1118	7.1000e-004	0.1125	0.0296	6.6000e-004	0.0303		79.2880	79.2880	2.8200e-003		79.3472
Total	**0.0178**	**0.0231**	**0.2385**	**1.2300e-003**	**0.1118**	**7.1000e-004**	**0.1125**	**0.0296**	**6.6000e-004**	**0.0303**		**79.2880**	**79.2880**	**2.8200e-003**		**79.3472**

RCH Expansion Project Phase IIb Construction

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	377.00	Bed	6.19	600,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2030
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - 600,000 sq ft hospital bed tower

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	20.00	140.00
tblConstructionPhase	NumDays	230.00	650.00
tblConstructionPhase	NumDays	20.00	145.00
tblConstructionPhase	NumDays	20.00	90.00

tblConstructionPhase	PhaseEndDate	3/13/2028	8/20/2027
tblConstructionPhase	PhaseEndDate	12/24/2027	12/10/2027
tblConstructionPhase	PhaseStartDate	8/31/2027	2/8/2027
tblConstructionPhase	PhaseStartDate	8/21/2027	8/9/2027
tblGrading	MaterialExported	0.00	32,917.00
tblLandUse	LandUseSquareFeet	269,840.61	600,000.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblTripsAndVMT	HaulingTripNumber	897.00	278.00
tblTripsAndVMT	HaulingTripNumber	4,115.00	4,114.00
tblTripsAndVMT	WorkerTripNumber	192.00	23.00
tblTripsAndVMT	WorkerTripNumber	38.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.8734	16.3214	20.6027	0.0341	1.5495	0.7470	2.2966	0.2580	0.6899	0.9479	0.0000	3,210.2688	3,210.2688	0.9340	0.0000	3,229.8826
2025	3.8290	34.8296	48.1235	0.1739	9.0122	1.5180	10.5302	3.5991	1.3966	4.9957	0.0000	16,385.6652	16,385.6652	0.9513	0.0000	16,405.6425
2026	1.8258	15.2074	22.1084	0.0495	0.8733	0.6000	1.4733	0.2441	0.5629	0.8070	0.0000	4,574.1959	4,574.1959	0.5897	0.0000	4,586.5799
2027	27.5421	22.3408	34.4996	0.0706	1.0410	0.9406	1.9816	0.2886	0.8845	1.1731	0.0000	6,539.8118	6,539.8118	1.0366	0.0000	6,561.5798

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.8734	16.3214	20.6027	0.0341	0.7281	0.7470	1.4752	0.1336	0.6899	0.8235	0.0000	3,210.2688	3,210.2688	0.9340	0.0000	3,229.8826
2025	3.8290	34.8296	48.1235	0.1739	5.8065	1.5180	7.3245	2.0305	1.3966	3.4271	0.0000	16,385.6652	16,385.6652	0.9513	0.0000	16,405.6425
2026	1.8258	15.2074	22.1084	0.0495	0.8733	0.6000	1.4733	0.2441	0.5629	0.8070	0.0000	4,574.1959	4,574.1959	0.5897	0.0000	4,586.5799
2027	27.5421	22.3408	34.4996	0.0706	1.0410	0.9406	1.9816	0.2886	0.8845	1.1731	0.0000	6,539.8118	6,539.8118	1.0366	0.0000	6,561.5798

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.28**	**0.00**	**24.73**	**38.57**	**0.00**	**21.37**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/26/2024	1/14/2025	5	145	
2	Grading	Grading	1/15/2025	2/11/2025	5	20	
3	Trenching	Trenching	2/12/2025	3/3/2025	5	14	
4	Building Construction	Building Construction	3/4/2025	8/30/2027	5	650	
5	Architectural Coating	Architectural Coating	2/8/2027	8/20/2027	5	140	
6	Paving	Paving	8/9/2027	12/10/2027	5	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 900,000; Non-Residential Outdoor: 300,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Building Construction	Cranes	2	4.00	226	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	98.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3465	0.0000	1.3465	0.2039	0.0000	0.2039			0.0000			0.0000
Off-Road	1.8196	16.0835	19.8548	0.0307		0.7377	0.7377		0.6813	0.6813		2,949.4845	2,949.4845	0.9286		2,968.9856
Total	**1.8196**	**16.0835**	**19.8548**	**0.0307**	**1.3465**	**0.7377**	**2.0842**	**0.2039**	**0.6813**	**0.8852**		**2,949.4845**	**2,949.4845**	**0.9286**		**2,968.9856**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0218	0.2010	0.2748	1.3500e-003	0.0353	8.3300e-003	0.0437	9.6200e-003	7.6600e-003	0.0173		126.6392	126.6392	7.8000e-004		126.6555
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0320	0.0369	0.4731	2.0200e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		134.1452	134.1452	4.5800e-003		134.2414
Total	**0.0538**	**0.2379**	**0.7480**	**3.3700e-003**	**0.2030**	**9.3700e-003**	**0.2124**	**0.0541**	**8.6200e-003**	**0.0627**		**260.7844**	**260.7844**	**5.3600e-003**		**260.8969**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5251	0.0000	0.5251	0.0795	0.0000	0.0795			0.0000			0.0000
Off-Road	1.8196	16.0835	19.8548	0.0307		0.7377	0.7377		0.6813	0.6813	0.0000	2,949.4845	2,949.4845	0.9286		2,968.9856
Total	**1.8196**	**16.0835**	**19.8548**	**0.0307**	**0.5251**	**0.7377**	**1.2628**	**0.0795**	**0.6813**	**0.7608**	**0.0000**	**2,949.4845**	**2,949.4845**	**0.9286**		**2,968.9856**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0218	0.2010	0.2748	1.3500e-003	0.0353	8.3300e-003	0.0437	9.6200e-003	7.6600e-003	0.0173		126.6392	126.6392	7.8000e-004		126.6555
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0320	0.0369	0.4731	2.0200e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		134.1452	134.1452	4.5800e-003		134.2414
Total	**0.0538**	**0.2379**	**0.7480**	**3.3700e-003**	**0.2030**	**9.3700e-003**	**0.2124**	**0.0541**	**8.6200e-003**	**0.0627**		**260.7844**	**260.7844**	**5.3600e-003**		**260.8969**

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3465	0.0000	1.3465	0.2039	0.0000	0.2039			0.0000			0.0000
Off-Road	1.6450	13.7428	18.4921	0.0307		0.6239	0.6239		0.5766	0.5766		2,948.8920	2,948.8920	0.9284		2,968.3891
Total	**1.6450**	**13.7428**	**18.4921**	**0.0307**	**1.3465**	**0.6239**	**1.9704**	**0.2039**	**0.5766**	**0.7805**		**2,948.8920**	**2,948.8920**	**0.9284**		**2,968.3891**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0216	0.2004	0.2735	1.3500e-003	0.3757	8.3800e-003	0.3840	0.0932	7.7100e-003	0.1009		126.6235	126.6235	7.8000e-004		126.6399
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0306	0.0353	0.4542	2.0200e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		132.6416	132.6416	4.4400e-003		132.7349
Total	**0.0522**	**0.2357**	**0.7278**	**3.3700e-003**	**0.5433**	**9.4300e-003**	**0.5527**	**0.1376**	**8.6800e-003**	**0.1463**		**259.2650**	**259.2650**	**5.2200e-003**		**259.3748**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5251	0.0000	0.5251	0.0795	0.0000	0.0795			0.0000			0.0000
Off-Road	1.6450	13.7428	18.4921	0.0307		0.6239	0.6239		0.5766	0.5766	0.0000	2,948.8920	2,948.8920	0.9284		2,968.3891
Total	**1.6450**	**13.7428**	**18.4921**	**0.0307**	**0.5251**	**0.6239**	**1.1490**	**0.0795**	**0.5766**	**0.6561**	**0.0000**	**2,948.8920**	**2,948.8920**	**0.9284**		**2,968.3891**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0216	0.2004	0.2735	1.3500e-003	0.3757	8.3800e-003	0.3840	0.0932	7.7100e-003	0.1009		126.6235	126.6235	7.8000e-004		126.6399
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0306	0.0353	0.4542	2.0200e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		132.6416	132.6416	4.4400e-003		132.7349
Total	**0.0522**	**0.2357**	**0.7278**	**3.3700e-003**	**0.5433**	**9.4300e-003**	**0.5527**	**0.1376**	**8.6800e-003**	**0.1463**		**259.2650**	**259.2650**	**5.2200e-003**		**259.3748**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.2552	0.0000	5.2552	2.5715	0.0000	2.5715			0.0000			0.0000
Off-Road	1.4764	13.2944	18.3233	0.0276		0.6183	0.6183		0.5689	0.5689		2,667.6463	2,667.6463	0.8628		2,685.7645
Total	**1.4764**	**13.2944**	**18.3233**	**0.0276**	**5.2552**	**0.6183**	**5.8736**	**2.5715**	**0.5689**	**3.1403**		**2,667.6463**	**2,667.6463**	**0.8628**		**2,685.7645**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3221	21.4999	29.3460	0.1444	3.5893	0.8987	4.4879	0.9832	0.8268	1.8100		13,585.3774	13,585.3774	0.0841		13,587.1432
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0306	0.0353	0.4542	2.0200e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		132.6416	132.6416	4.4400e-003		132.7349
Total	**2.3527**	**21.5352**	**29.8003**	**0.1464**	**3.7569**	**0.8997**	**4.6566**	**1.0277**	**0.8277**	**1.8554**		**13,718.0190**	**13,718.0190**	**0.0885**		**13,719.8780**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0495	0.0000	2.0495	1.0029	0.0000	1.0029			0.0000			0.0000
Off-Road	1.4764	13.2944	18.3233	0.0276		0.6183	0.6183		0.5689	0.5689	0.0000	2,667.6463	2,667.6463	0.8628		2,685.7645
Total	**1.4764**	**13.2944**	**18.3233**	**0.0276**	**2.0495**	**0.6183**	**2.6679**	**1.0029**	**0.5689**	**1.5717**	**0.0000**	**2,667.6463**	**2,667.6463**	**0.8628**		**2,685.7645**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3221	21.4999	29.3460	0.1444	3.5893	0.8987	4.4879	0.9832	0.8268	1.8100		13,585.3774	13,585.3774	0.0841		13,587.1432
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0306	0.0353	0.4542	2.0200e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		132.6416	132.6416	4.4400e-003		132.7349
Total	**2.3527**	**21.5352**	**29.8003**	**0.1464**	**3.7569**	**0.8997**	**4.6566**	**1.0277**	**0.8277**	**1.8554**		**13,718.0190**	**13,718.0190**	**0.0885**		**13,719.8780**

3.4 Trenching - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3035	2.5877	5.5716	8.4200e-003		0.1155	0.1155		0.1063	0.1063		815.0605	815.0605	0.2636		820.5963
Total	**0.3035**	**2.5877**	**5.5716**	**8.4200e-003**		**0.1155**	**0.1155**		**0.1063**	**0.1063**		**815.0605**	**815.0605**	**0.2636**		**820.5963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0102	0.0118	0.1514	6.7000e-004	0.0559	3.5000e-004	0.0562	0.0148	3.2000e-004	0.0152		44.2139	44.2139	1.4800e-003		44.2450
Total	**0.0102**	**0.0118**	**0.1514**	**6.7000e-004**	**0.0559**	**3.5000e-004**	**0.0562**	**0.0148**	**3.2000e-004**	**0.0152**		**44.2139**	**44.2139**	**1.4800e-003**		**44.2450**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3035	2.5877	5.5716	8.4200e-003		0.1155	0.1155		0.1063	0.1063	0.0000	815.0605	815.0605	0.2636		820.5963
Total	**0.3035**	**2.5877**	**5.5716**	**8.4200e-003**		**0.1155**	**0.1155**		**0.1063**	**0.1063**	**0.0000**	**815.0605**	**815.0605**	**0.2636**		**820.5963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0102	0.0118	0.1514	6.7000e-004	0.0559	3.5000e-004	0.0562	0.0148	3.2000e-004	0.0152		44.2139	44.2139	1.4800e-003		44.2450
Total	**0.0102**	**0.0118**	**0.1514**	**6.7000e-004**	**0.0559**	**3.5000e-004**	**0.0562**	**0.0148**	**3.2000e-004**	**0.0152**		**44.2139**	**44.2139**	**1.4800e-003**		**44.2450**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688		2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**		**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4815	3.2704	6.4081	0.0203	0.6161	0.1050	0.7212	0.1759	0.0966	0.2725		1,907.0048	1,907.0048	0.0117		1,907.2498
Worker	0.0469	0.0541	0.6965	3.0900e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4900e-003	0.0697		203.3837	203.3837	6.8100e-003		203.5268
Total	**0.5284**	**3.3246**	**7.1046**	**0.0234**	**0.8732**	**0.1066**	**0.9798**	**0.2441**	**0.0981**	**0.3422**		**2,110.3885**	**2,110.3885**	**0.0185**		**2,110.7766**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688	0.0000	2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**	**0.0000**	**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4815	3.2704	6.4081	0.0203	0.6161	0.1050	0.7212	0.1759	0.0966	0.2725		1,907.0048	1,907.0048	0.0117		1,907.2498
Worker	0.0469	0.0541	0.6965	3.0900e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4900e-003	0.0697		203.3837	203.3837	6.8100e-003		203.5268
Total	**0.5284**	**3.3246**	**7.1046**	**0.0234**	**0.8732**	**0.1066**	**0.9798**	**0.2441**	**0.0981**	**0.3422**		**2,110.3885**	**2,110.3885**	**0.0185**		**2,110.7766**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688		2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**		**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4681	3.1768	6.3059	0.0203	0.6162	0.1007	0.7169	0.1760	0.0926	0.2686		1,906.5760	1,906.5760	0.0113		1,906.8139
Worker	0.0449	0.0521	0.6721	3.0900e-003	0.2571	1.6200e-003	0.2587	0.0682	1.5100e-003	0.0697		201.4189	201.4189	6.6400e-003		201.5582
Total	**0.5130**	**3.2288**	**6.9780**	**0.0234**	**0.8733**	**0.1023**	**0.9756**	**0.2441**	**0.0942**	**0.3383**		**2,107.9949**	**2,107.9949**	**0.0180**		**2,108.3721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688	0.0000	2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**	**0.0000**	**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4681	3.1768	6.3059	0.0203	0.6162	0.1007	0.7169	0.1760	0.0926	0.2686		1,906.5760	1,906.5760	0.0113		1,906.8139
Worker	0.0449	0.0521	0.6721	3.0900e-003	0.2571	1.6200e-003	0.2587	0.0682	1.5100e-003	0.0697		201.4189	201.4189	6.6400e-003		201.5582
Total	**0.5130**	**3.2288**	**6.9780**	**0.0234**	**0.8733**	**0.1023**	**0.9756**	**0.2441**	**0.0942**	**0.3383**		**2,107.9949**	**2,107.9949**	**0.0180**		**2,108.3721**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688		2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**		**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4650	3.1547	6.2828	0.0203	0.6162	0.1010	0.7172	0.1760	0.0929	0.2689		1,906.6472	1,906.6472	0.0114		1,906.8856
Worker	0.0431	0.0502	0.6507	3.0900e-003	0.2571	1.6400e-003	0.2587	0.0682	1.5200e-003	0.0697		199.7355	199.7355	6.4800e-003		199.8715
Total	**0.5081**	**3.2049**	**6.9336**	**0.0234**	**0.8733**	**0.1026**	**0.9759**	**0.2442**	**0.0944**	**0.3386**		**2,106.3827**	**2,106.3827**	**0.0178**		**2,106.7571**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3128	11.9786	15.1304	0.0260		0.4977	0.4977		0.4688	0.4688	0.0000	2,466.2010	2,466.2010	0.5718		2,478.2078
Total	**1.3128**	**11.9786**	**15.1304**	**0.0260**		**0.4977**	**0.4977**		**0.4688**	**0.4688**	**0.0000**	**2,466.2010**	**2,466.2010**	**0.5718**		**2,478.2078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4650	3.1547	6.2828	0.0203	0.6162	0.1010	0.7172	0.1760	0.0929	0.2689		1,906.6472	1,906.6472	0.0114		1,906.8856
Worker	0.0431	0.0502	0.6507	3.0900e-003	0.2571	1.6400e-003	0.2587	0.0682	1.5200e-003	0.0697		199.7355	199.7355	6.4800e-003		199.8715
Total	**0.5081**	**3.2049**	**6.9336**	**0.0234**	**0.8733**	**0.1026**	**0.9759**	**0.2442**	**0.0944**	**0.3386**		**2,106.3827**	**2,106.3827**	**0.0178**		**2,106.7571**

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.8304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030		562.8961	562.8961	0.0307		563.5409
Total	**25.1721**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**		**562.8961**	**562.8961**	**0.0307**		**563.5409**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.3800e-003	0.0109	0.1415	6.7000e-004	0.0559	3.6000e-004	0.0562	0.0148	3.3000e-004	0.0152		43.4208	43.4208	1.4100e-003		43.4503
Total	**9.3800e-003**	**0.0109**	**0.1415**	**6.7000e-004**	**0.0559**	**3.6000e-004**	**0.0562**	**0.0148**	**3.3000e-004**	**0.0152**		**43.4208**	**43.4208**	**1.4100e-003**		**43.4503**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.8304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030	0.0000	562.8961	562.8961	0.0307		563.5409
Total	**25.1721**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.5409**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.3800e-003	0.0109	0.1415	6.7000e-004	0.0559	3.6000e-004	0.0562	0.0148	3.3000e-004	0.0152		43.4208	43.4208	1.4100e-003		43.4503
Total	**9.3800e-003**	**0.0109**	**0.1415**	**6.7000e-004**	**0.0559**	**3.6000e-004**	**0.0562**	**0.0148**	**3.3000e-004**	**0.0152**		**43.4208**	**43.4208**	**1.4100e-003**		**43.4503**

3.7 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5210	4.8335	8.3930	0.0132		0.2363	0.2363		0.2174	0.2174		1,274.0698	1,274.0698	0.4121		1,282.7230
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5210**	**4.8335**	**8.3930**	**0.0132**		**0.2363**	**0.2363**		**0.2174**	**0.2174**		**1,274.0698**	**1,274.0698**	**0.4121**		**1,282.7230**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0188	0.0218	0.2829	1.3400e-003	0.1118	7.1000e-004	0.1125	0.0296	6.6000e-004	0.0303		86.8415	86.8415	2.8200e-003		86.9006
Total	**0.0188**	**0.0218**	**0.2829**	**1.3400e-003**	**0.1118**	**7.1000e-004**	**0.1125**	**0.0296**	**6.6000e-004**	**0.0303**		**86.8415**	**86.8415**	**2.8200e-003**		**86.9006**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5210	4.8335	8.3930	0.0132		0.2363	0.2363		0.2174	0.2174	0.0000	1,274.0698	1,274.0698	0.4121		1,282.7230
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5210**	**4.8335**	**8.3930**	**0.0132**		**0.2363**	**0.2363**		**0.2174**	**0.2174**	**0.0000**	**1,274.0698**	**1,274.0698**	**0.4121**		**1,282.7230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0188	0.0218	0.2829	1.3400e-003	0.1118	7.1000e-004	0.1125	0.0296	6.6000e-004	0.0303		86.8415	86.8415	2.8200e-003		86.9006
Total	**0.0188**	**0.0218**	**0.2829**	**1.3400e-003**	**0.1118**	**7.1000e-004**	**0.1125**	**0.0296**	**6.6000e-004**	**0.0303**		**86.8415**	**86.8415**	**2.8200e-003**		**86.9006**

RCH Expansion Project Phase IIb Construction

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	377.00	Bed	6.19	600,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2030
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - 600,000 sq ft hospital bed tower

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	20.00	140.00
tblConstructionPhase	NumDays	230.00	650.00
tblConstructionPhase	NumDays	20.00	145.00
tblConstructionPhase	NumDays	20.00	90.00

tblConstructionPhase	PhaseEndDate	3/13/2028	8/20/2027
tblConstructionPhase	PhaseEndDate	12/24/2027	12/10/2027
tblConstructionPhase	PhaseStartDate	8/31/2027	2/8/2027
tblConstructionPhase	PhaseStartDate	8/21/2027	8/9/2027
tblGrading	MaterialExported	0.00	32,917.00
tblLandUse	LandUseSquareFeet	269,840.61	600,000.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblTripsAndVMT	HaulingTripNumber	897.00	278.00
tblTripsAndVMT	HaulingTripNumber	4,115.00	4,114.00
tblTripsAndVMT	WorkerTripNumber	192.00	23.00
tblTripsAndVMT	WorkerTripNumber	38.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1263	1.1027	1.3895	2.2900e-003	0.1044	0.0504	0.1548	0.0174	0.0466	0.0639	0.0000	195.9626	195.9626	0.0572	0.0000	197.1637
2025	0.2509	2.1220	3.2023	7.3000e-003	0.1927	0.0848	0.2775	0.0638	0.0792	0.1430	0.0000	616.6614	616.6614	0.0727	0.0000	618.1875
2026	0.2401	2.0006	3.0397	6.4200e-003	0.1123	0.0783	0.1906	0.0315	0.0735	0.1049	0.0000	538.9192	538.9192	0.0698	0.0000	540.3859
2027	1.9446	1.6960	2.6498	5.3400e-003	0.0828	0.0696	0.1523	0.0231	0.0655	0.0886	0.0000	448.6239	448.6239	0.0650	0.0000	449.9887
Total	**2.5619**	**6.9213**	**10.2813**	**0.0214**	**0.4922**	**0.2831**	**0.7752**	**0.1357**	**0.2647**	**0.4004**	**0.0000**	**1,800.1671**	**1,800.1671**	**0.2647**	**0.0000**	**1,805.7258**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1263	1.1027	1.3895	2.2900e-003	0.0489	0.0504	0.0994	8.9600e-003	0.0466	0.0555	0.0000	195.9624	195.9624	0.0572	0.0000	197.1635
2025	0.2509	2.1220	3.2023	7.3000e-003	0.1565	0.0848	0.2413	0.0475	0.0792	0.1267	0.0000	616.6610	616.6610	0.0727	0.0000	618.1872
2026	0.2401	2.0006	3.0397	6.4200e-003	0.1123	0.0783	0.1906	0.0315	0.0735	0.1049	0.0000	538.9188	538.9188	0.0698	0.0000	540.3855
2027	1.9446	1.6960	2.6498	5.3400e-003	0.0828	0.0696	0.1523	0.0231	0.0655	0.0886	0.0000	448.6236	448.6236	0.0650	0.0000	449.9884
Total	**2.5619**	**6.9213**	**10.2813**	**0.0214**	**0.4005**	**0.2831**	**0.6836**	**0.1110**	**0.2647**	**0.3757**	**0.0000**	**1,800.1658**	**1,800.1658**	**0.2647**	**0.0000**	**1,805.7246**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**18.61**	**0.00**	**11.82**	**18.21**	**0.00**	**6.17**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/26/2024	1/14/2025	5	145	
2	Grading	Grading	1/15/2025	2/11/2025	5	20	
3	Trenching	Trenching	2/12/2025	3/3/2025	5	14	
4	Building Construction	Building Construction	3/4/2025	8/30/2027	5	650	
5	Architectural Coating	Architectural Coating	2/8/2027	8/20/2027	5	140	
6	Paving	Paving	8/9/2027	12/10/2027	5	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 900,000; Non-Residential Outdoor: 300,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	16	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	6.00	255	0.40
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	1	8.00	162	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Building Construction	Cranes	2	4.00	226	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	278.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,114.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	98.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0909	0.0000	0.0909	0.0138	0.0000	0.0138	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1228	1.0856	1.3402	2.0700e-003		0.0498	0.0498		0.0460	0.0460	0.0000	180.6116	180.6116	0.0569	0.0000	181.8058
Total	**0.1228**	**1.0856**	**1.3402**	**2.0700e-003**	**0.0909**	**0.0498**	**0.1407**	**0.0138**	**0.0460**	**0.0598**	**0.0000**	**180.6116**	**180.6116**	**0.0569**	**0.0000**	**181.8058**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5100e-003	0.0143	0.0213	9.0000e-005	2.3500e-003	5.6000e-004	2.9100e-003	6.4000e-004	5.2000e-004	1.1600e-003	0.0000	7.7466	7.7466	5.0000e-005	0.0000	7.7476
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	2.7500e-003	0.0280	1.3000e-004	0.0111	7.0000e-005	0.0112	2.9600e-003	7.0000e-005	3.0200e-003	0.0000	7.6044	7.6044	2.8000e-004	0.0000	7.6103
Total	**3.4300e-003**	**0.0170**	**0.0493**	**2.2000e-004**	**0.0135**	**6.3000e-004**	**0.0141**	**3.6000e-003**	**5.9000e-004**	**4.1800e-003**	**0.0000**	**15.3510**	**15.3510**	**3.3000e-004**	**0.0000**	**15.3579**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1228	1.0856	1.3402	2.0700e-003		0.0498	0.0498		0.0460	0.0460	0.0000	180.6114	180.6114	0.0569	0.0000	181.8055
Total	**0.1228**	**1.0856**	**1.3402**	**2.0700e-003**	**0.0355**	**0.0498**	**0.0852**	**5.3700e-003**	**0.0460**	**0.0514**	**0.0000**	**180.6114**	**180.6114**	**0.0569**	**0.0000**	**181.8055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5100e-003	0.0143	0.0213	9.0000e-005	2.3500e-003	5.6000e-004	2.9100e-003	6.4000e-004	5.2000e-004	1.1600e-003	0.0000	7.7466	7.7466	5.0000e-005	0.0000	7.7476
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	2.7500e-003	0.0280	1.3000e-004	0.0111	7.0000e-005	0.0112	2.9600e-003	7.0000e-005	3.0200e-003	0.0000	7.6044	7.6044	2.8000e-004	0.0000	7.6103
Total	**3.4300e-003**	**0.0170**	**0.0493**	**2.2000e-004**	**0.0135**	**6.3000e-004**	**0.0141**	**3.6000e-003**	**5.9000e-004**	**4.1800e-003**	**0.0000**	**15.3510**	**15.3510**	**3.3000e-004**	**0.0000**	**15.3579**

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.7300e-003	0.0000	6.7300e-003	1.0200e-003	0.0000	1.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2300e-003	0.0687	0.0925	1.5000e-004		3.1200e-003	3.1200e-003		2.8800e-003	2.8800e-003	0.0000	13.3760	13.3760	4.2100e-003	0.0000	13.4644
Total	**8.2300e-003**	**0.0687**	**0.0925**	**1.5000e-004**	**6.7300e-003**	**3.1200e-003**	**9.8500e-003**	**1.0200e-003**	**2.8800e-003**	**3.9000e-003**	**0.0000**	**13.3760**	**13.3760**	**4.2100e-003**	**0.0000**	**13.4644**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	1.0500e-003	1.5700e-003	1.0000e-005	1.8400e-003	4.0000e-005	1.8800e-003	4.6000e-004	4.0000e-005	5.0000e-004	0.0000	0.5738	0.5738	0.0000	0.0000	0.5738
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.0000e-004	1.9900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.5569	0.5569	2.0000e-005	0.0000	0.5574
Total	**2.5000e-004**	**1.2500e-003**	**3.5600e-003**	**2.0000e-005**	**2.6600e-003**	**5.0000e-005**	**2.7100e-003**	**6.8000e-004**	**4.0000e-005**	**7.2000e-004**	**0.0000**	**1.1307**	**1.1307**	**2.0000e-005**	**0.0000**	**1.1312**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6300e-003	0.0000	2.6300e-003	4.0000e-004	0.0000	4.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2300e-003	0.0687	0.0925	1.5000e-004		3.1200e-003	3.1200e-003		2.8800e-003	2.8800e-003	0.0000	13.3759	13.3759	4.2100e-003	0.0000	13.4644
Total	**8.2300e-003**	**0.0687**	**0.0925**	**1.5000e-004**	**2.6300e-003**	**3.1200e-003**	**5.7500e-003**	**4.0000e-004**	**2.8800e-003**	**3.2800e-003**	**0.0000**	**13.3759**	**13.3759**	**4.2100e-003**	**0.0000**	**13.4644**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	1.0500e-003	1.5700e-003	1.0000e-005	1.8400e-003	4.0000e-005	1.8800e-003	4.6000e-004	4.0000e-005	5.0000e-004	0.0000	0.5738	0.5738	0.0000	0.0000	0.5738
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.0000e-004	1.9900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.5569	0.5569	2.0000e-005	0.0000	0.5574
Total	**2.5000e-004**	**1.2500e-003**	**3.5600e-003**	**2.0000e-005**	**2.6600e-003**	**5.0000e-005**	**2.7100e-003**	**6.8000e-004**	**4.0000e-005**	**7.2000e-004**	**0.0000**	**1.1307**	**1.1307**	**2.0000e-005**	**0.0000**	**1.1312**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0526	0.0000	0.0526	0.0257	0.0000	0.0257	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0148	0.1329	0.1832	2.8000e-004		6.1800e-003	6.1800e-003		5.6900e-003	5.6900e-003	0.0000	24.2005	24.2005	7.8300e-003	0.0000	24.3649
Total	**0.0148**	**0.1329**	**0.1832**	**2.8000e-004**	**0.0526**	**6.1800e-003**	**0.0587**	**0.0257**	**5.6900e-003**	**0.0314**	**0.0000**	**24.2005**	**24.2005**	**7.8300e-003**	**0.0000**	**24.3649**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0238	0.2262	0.3367	1.4400e-003	0.0354	8.9900e-003	0.0444	9.7000e-003	8.2700e-003	0.0180	0.0000	123.1155	123.1155	7.7000e-004	0.0000	123.1317
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	3.9000e-004	3.9800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.1139	1.1139	4.0000e-005	0.0000	1.1147
Total	**0.0241**	**0.2266**	**0.3407**	**1.4600e-003**	**0.0370**	**9.0000e-003**	**0.0460**	**0.0101**	**8.2800e-003**	**0.0184**	**0.0000**	**124.2294**	**124.2294**	**8.1000e-004**	**0.0000**	**124.2464**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0205	0.0000	0.0205	0.0100	0.0000	0.0100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0148	0.1329	0.1832	2.8000e-004		6.1800e-003	6.1800e-003		5.6900e-003	5.6900e-003	0.0000	24.2005	24.2005	7.8300e-003	0.0000	24.3648
Total	**0.0148**	**0.1329**	**0.1832**	**2.8000e-004**	**0.0205**	**6.1800e-003**	**0.0267**	**0.0100**	**5.6900e-003**	**0.0157**	**0.0000**	**24.2005**	**24.2005**	**7.8300e-003**	**0.0000**	**24.3648**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0238	0.2262	0.3367	1.4400e-003	0.0354	8.9900e-003	0.0444	9.7000e-003	8.2700e-003	0.0180	0.0000	123.1155	123.1155	7.7000e-004	0.0000	123.1317
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	3.9000e-004	3.9800e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.1139	1.1139	4.0000e-005	0.0000	1.1147
Total	**0.0241**	**0.2266**	**0.3407**	**1.4600e-003**	**0.0370**	**9.0000e-003**	**0.0460**	**0.0101**	**8.2800e-003**	**0.0184**	**0.0000**	**124.2294**	**124.2294**	**8.1000e-004**	**0.0000**	**124.2464**

3.4 Trenching - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1200e-003	0.0181	0.0390	6.0000e-005		8.1000e-004	8.1000e-004		7.4000e-004	7.4000e-004	0.0000	5.1759	5.1759	1.6700e-003	0.0000	5.2110
Total	**2.1200e-003**	**0.0181**	**0.0390**	**6.0000e-005**		**8.1000e-004**	**8.1000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**5.1759**	**5.1759**	**1.6700e-003**	**0.0000**	**5.2110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.3000e-004	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2599	0.2599	1.0000e-005	0.0000	0.2601
Total	**6.0000e-005**	**9.0000e-005**	**9.3000e-004**	**0.0000**	**3.8000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2599**	**0.2599**	**1.0000e-005**	**0.0000**	**0.2601**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1200e-003	0.0181	0.0390	6.0000e-005		8.1000e-004	8.1000e-004		7.4000e-004	7.4000e-004	0.0000	5.1759	5.1759	1.6700e-003	0.0000	5.2110
Total	**2.1200e-003**	**0.0181**	**0.0390**	**6.0000e-005**		**8.1000e-004**	**8.1000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**5.1759**	**5.1759**	**1.6700e-003**	**0.0000**	**5.2110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.3000e-004	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2599	0.2599	1.0000e-005	0.0000	0.2601
Total	**6.0000e-005**	**9.0000e-005**	**9.3000e-004**	**0.0000**	**3.8000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2599**	**0.2599**	**1.0000e-005**	**0.0000**	**0.2601**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1424	1.2997	1.6417	2.8200e-003		0.0540	0.0540		0.0509	0.0509	0.0000	242.7470	242.7470	0.0563	0.0000	243.9289
Total	**0.1424**	**1.2997**	**1.6417**	**2.8200e-003**		**0.0540**	**0.0540**		**0.0509**	**0.0509**	**0.0000**	**242.7470**	**242.7470**	**0.0563**	**0.0000**	**243.9289**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0544	0.3682	0.8347	2.2000e-003	0.0659	0.0114	0.0774	0.0189	0.0105	0.0294	0.0000	187.0107	187.0107	1.1700e-003	0.0000	187.0353
Worker	4.5100e-003	6.4900e-003	0.0662	3.1000e-004	0.0274	1.7000e-004	0.0276	7.2800e-003	1.6000e-004	7.4500e-003	0.0000	18.5313	18.5313	6.7000e-004	0.0000	18.5454
Total	**0.0589**	**0.3746**	**0.9009**	**2.5100e-003**	**0.0934**	**0.0116**	**0.1050**	**0.0261**	**0.0107**	**0.0368**	**0.0000**	**205.5420**	**205.5420**	**1.8400e-003**	**0.0000**	**205.5807**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1424	1.2997	1.6416	2.8200e-003		0.0540	0.0540		0.0509	0.0509	0.0000	242.7468	242.7468	0.0563	0.0000	243.9286
Total	**0.1424**	**1.2997**	**1.6416**	**2.8200e-003**		**0.0540**	**0.0540**		**0.0509**	**0.0509**	**0.0000**	**242.7468**	**242.7468**	**0.0563**	**0.0000**	**243.9286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0544	0.3682	0.8347	2.2000e-003	0.0659	0.0114	0.0774	0.0189	0.0105	0.0294	0.0000	187.0107	187.0107	1.1700e-003	0.0000	187.0353
Worker	4.5100e-003	6.4900e-003	0.0662	3.1000e-004	0.0274	1.7000e-004	0.0276	7.2800e-003	1.6000e-004	7.4500e-003	0.0000	18.5313	18.5313	6.7000e-004	0.0000	18.5454
Total	**0.0589**	**0.3746**	**0.9009**	**2.5100e-003**	**0.0934**	**0.0116**	**0.1050**	**0.0261**	**0.0107**	**0.0368**	**0.0000**	**205.5420**	**205.5420**	**1.8400e-003**	**0.0000**	**205.5807**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1713	1.5632	1.9745	3.4000e-003		0.0649	0.0649		0.0612	0.0612	0.0000	291.9676	291.9676	0.0677	0.0000	293.3891
Total	**0.1713**	**1.5632**	**1.9745**	**3.4000e-003**		**0.0649**	**0.0649**		**0.0612**	**0.0612**	**0.0000**	**291.9676**	**291.9676**	**0.0677**	**0.0000**	**293.3891**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0636	0.4299	0.9885	2.6400e-003	0.0793	0.0132	0.0925	0.0227	0.0121	0.0348	0.0000	224.8791	224.8791	1.3700e-003	0.0000	224.9078
Worker	5.2100e-003	7.5000e-003	0.0767	3.7000e-004	0.0330	2.1000e-004	0.0332	8.7600e-003	2.0000e-004	8.9600e-003	0.0000	22.0724	22.0724	7.9000e-004	0.0000	22.0889
Total	**0.0688**	**0.4374**	**1.0652**	**3.0100e-003**	**0.1123**	**0.0134**	**0.1257**	**0.0315**	**0.0123**	**0.0438**	**0.0000**	**246.9515**	**246.9515**	**2.1600e-003**	**0.0000**	**246.9968**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1713	1.5632	1.9745	3.4000e-003		0.0649	0.0649		0.0612	0.0612	0.0000	291.9673	291.9673	0.0677	0.0000	293.3888
Total	**0.1713**	**1.5632**	**1.9745**	**3.4000e-003**		**0.0649**	**0.0649**		**0.0612**	**0.0612**	**0.0000**	**291.9673**	**291.9673**	**0.0677**	**0.0000**	**293.3888**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0636	0.4299	0.9885	2.6400e-003	0.0793	0.0132	0.0925	0.0227	0.0121	0.0348	0.0000	224.8791	224.8791	1.3700e-003	0.0000	224.9078
Worker	5.2100e-003	7.5000e-003	0.0767	3.7000e-004	0.0330	2.1000e-004	0.0332	8.7600e-003	2.0000e-004	8.9600e-003	0.0000	22.0724	22.0724	7.9000e-004	0.0000	22.0889
Total	**0.0688**	**0.4374**	**1.0652**	**3.0100e-003**	**0.1123**	**0.0134**	**0.1257**	**0.0315**	**0.0123**	**0.0438**	**0.0000**	**246.9515**	**246.9515**	**2.1600e-003**	**0.0000**	**246.9968**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1129	1.0302	1.3012	2.2400e-003		0.0428	0.0428		0.0403	0.0403	0.0000	192.4078	192.4078	0.0446	0.0000	193.3445
Total	**0.1129**	**1.0302**	**1.3012**	**2.2400e-003**		**0.0428**	**0.0428**		**0.0403**	**0.0403**	**0.0000**	**192.4078**	**192.4078**	**0.0446**	**0.0000**	**193.3445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0416	0.2813	0.6489	1.7400e-003	0.0523	8.7100e-003	0.0610	0.0150	8.0100e-003	0.0230	0.0000	148.2017	148.2017	9.0000e-004	0.0000	148.2207
Worker	3.3000e-003	4.7700e-003	0.0489	2.5000e-004	0.0217	1.4000e-004	0.0219	5.7700e-003	1.3000e-004	5.9000e-003	0.0000	14.4235	14.4235	5.1000e-004	0.0000	14.4342
Total	**0.0449**	**0.2861**	**0.6978**	**1.9900e-003**	**0.0740**	**8.8500e-003**	**0.0829**	**0.0207**	**8.1400e-003**	**0.0289**	**0.0000**	**162.6252**	**162.6252**	**1.4100e-003**	**0.0000**	**162.6548**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1129	1.0302	1.3012	2.2400e-003		0.0428	0.0428		0.0403	0.0403	0.0000	192.4076	192.4076	0.0446	0.0000	193.3443
Total	**0.1129**	**1.0302**	**1.3012**	**2.2400e-003**		**0.0428**	**0.0428**		**0.0403**	**0.0403**	**0.0000**	**192.4076**	**192.4076**	**0.0446**	**0.0000**	**193.3443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0416	0.2813	0.6489	1.7400e-003	0.0523	8.7100e-003	0.0610	0.0150	8.0100e-003	0.0230	0.0000	148.2017	148.2017	9.0000e-004	0.0000	148.2207
Worker	3.3000e-003	4.7700e-003	0.0489	2.5000e-004	0.0217	1.4000e-004	0.0219	5.7700e-003	1.3000e-004	5.9000e-003	0.0000	14.4235	14.4235	5.1000e-004	0.0000	14.4342
Total	**0.0449**	**0.2861**	**0.6978**	**1.9900e-003**	**0.0740**	**8.8500e-003**	**0.0829**	**0.0207**	**8.1400e-003**	**0.0289**	**0.0000**	**162.6252**	**162.6252**	**1.4100e-003**	**0.0000**	**162.6548**

3.6 Architectural Coating - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.7381					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0239	0.1604	0.2533	4.2000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	35.7456	35.7456	1.9500e-003	0.0000	35.7865
Total	**1.7620**	**0.1604**	**0.2533**	**4.2000e-004**		**7.2100e-003**	**7.2100e-003**		**7.2100e-003**	**7.2100e-003**	**0.0000**	**35.7456**	**35.7456**	**1.9500e-003**	**0.0000**	**35.7865**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	8.4000e-004	8.6500e-003	4.0000e-005	3.8500e-003	2.0000e-005	3.8700e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	2.5522	2.5522	9.0000e-005	0.0000	2.5541
Total	**5.8000e-004**	**8.4000e-004**	**8.6500e-003**	**4.0000e-005**	**3.8500e-003**	**2.0000e-005**	**3.8700e-003**	**1.0200e-003**	**2.0000e-005**	**1.0400e-003**	**0.0000**	**2.5522**	**2.5522**	**9.0000e-005**	**0.0000**	**2.5541**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.7381					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0239	0.1604	0.2533	4.2000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	35.7455	35.7455	1.9500e-003	0.0000	35.7865
Total	**1.7620**	**0.1604**	**0.2533**	**4.2000e-004**		**7.2100e-003**	**7.2100e-003**		**7.2100e-003**	**7.2100e-003**	**0.0000**	**35.7455**	**35.7455**	**1.9500e-003**	**0.0000**	**35.7865**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	8.4000e-004	8.6500e-003	4.0000e-005	3.8500e-003	2.0000e-005	3.8700e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	2.5522	2.5522	9.0000e-005	0.0000	2.5541
Total	**5.8000e-004**	**8.4000e-004**	**8.6500e-003**	**4.0000e-005**	**3.8500e-003**	**2.0000e-005**	**3.8700e-003**	**1.0200e-003**	**2.0000e-005**	**1.0400e-003**	**0.0000**	**2.5522**	**2.5522**	**9.0000e-005**	**0.0000**	**2.5541**

3.7 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0234	0.2175	0.3777	5.9000e-004		0.0106	0.0106		9.7800e-003	9.7800e-003	0.0000	52.0118	52.0118	0.0168	0.0000	52.3650
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0234**	**0.2175**	**0.3777**	**5.9000e-004**		**0.0106**	**0.0106**		**9.7800e-003**	**9.7800e-003**	**0.0000**	**52.0118**	**52.0118**	**0.0168**	**0.0000**	**52.3650**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	1.0800e-003	0.0111	6.0000e-005	4.9500e-003	3.0000e-005	4.9800e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	3.2814	3.2814	1.1000e-004	0.0000	3.2838
Total	**7.5000e-004**	**1.0800e-003**	**0.0111**	**6.0000e-005**	**4.9500e-003**	**3.0000e-005**	**4.9800e-003**	**1.3100e-003**	**3.0000e-005**	**1.3400e-003**	**0.0000**	**3.2814**	**3.2814**	**1.1000e-004**	**0.0000**	**3.2838**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0234	0.2175	0.3777	5.9000e-004		0.0106	0.0106		9.7800e-003	9.7800e-003	0.0000	52.0117	52.0117	0.0168	0.0000	52.3649
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0234**	**0.2175**	**0.3777**	**5.9000e-004**		**0.0106**	**0.0106**		**9.7800e-003**	**9.7800e-003**	**0.0000**	**52.0117**	**52.0117**	**0.0168**	**0.0000**	**52.3649**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	1.0800e-003	0.0111	6.0000e-005	4.9500e-003	3.0000e-005	4.9800e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	3.2814	3.2814	1.1000e-004	0.0000	3.2838
Total	**7.5000e-004**	**1.0800e-003**	**0.0111**	**6.0000e-005**	**4.9500e-003**	**3.0000e-005**	**4.9800e-003**	**1.3100e-003**	**3.0000e-005**	**1.3400e-003**	**0.0000**	**3.2814**	**3.2814**	**1.1000e-004**	**0.0000**	**3.2838**

Alternative RCH Baseline Operations

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	373.00	Bed	6.13	328,921.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	184.39	1000sqft	4.23	184,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	297,777.00	328,277.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	893,330.00	984,830.00
tblAreaCoating	Area_Nonresidential_Interior	893330	984830
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77

tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365
tblLandUse	LandUseSquareFeet	266,977.58	328,921.00
tblLandUse	LandUseSquareFeet	184,390.00	184,392.00
tblTripsAndVMT	VendorTripNumber	98.00	108.00
tblTripsAndVMT	WorkerTripNumber	191.00	210.00
tblTripsAndVMT	WorkerTripNumber	38.00	42.00
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.8707	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Energy	1.8193	16.5389	13.8927	0.0992		1.2570	1.2570		1.2570	1.2570		19,846.6392	19,846.6392	0.3804	0.3639	19,967.4225
Mobile	58.4793	202.5556	627.7589	1.2889	94.0612	3.1475	97.2087	25.0998	2.8914	27.9912		119,529.7096	119,529.7096	4.7291		119,629.0198
Total	**76.1692**	**219.0951**	**641.7198**	**1.3881**	**94.0612**	**4.4047**	**98.4659**	**25.0998**	**4.1486**	**29.2484**		**139,376.4888**	**139,376.4888**	**5.1099**	**0.3639**	**139,596.5912**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.8707	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Energy	1.8193	16.5389	13.8927	0.0992		1.2570	1.2570		1.2570	1.2570		19,846.6392	19,846.6392	0.3804	0.3639	19,967.4225
Mobile	53.4135	154.7930	506.6292	0.9551	69.0094	2.3487	71.3581	18.4148	2.1573	20.5721		88,525.9448	88,525.9448	3.5944		88,601.4281
Total	**71.1034**	**171.3325**	**520.5901**	**1.0543**	**69.0094**	**3.6059**	**72.6153**	**18.4148**	**3.4145**	**21.8293**		**108,372.7240**	**108,372.7240**	**3.9753**	**0.3639**	**108,568.9994**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.65**	**21.80**	**18.88**	**24.05**	**26.63**	**18.13**	**26.25**	**26.63**	**17.70**	**25.37**	**0.00**	**22.24**	**22.24**	**22.20**	**0.00**	**22.23**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	53.4135	154.7930	506.6292	0.9551	69.0094	2.3487	71.3581	18.4148	2.1573	20.5721		88,525.9448	88,525.9448	3.5944		88,601.4281
Unmitigated	58.4793	202.5556	627.7589	1.2889	94.0612	3.1475	97.2087	25.0998	2.8914	27.9912		119,529.7096	119,529.7096	4.7291		119,629.0198

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	3,379.38	2,327.52	2058.96	11,787,471	8,631,162
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	3,450.25	2,129.83	1865.00	11,766,813	8,616,036
Medical Office Building	4,663.22	1,156.13	199.14	9,142,011	6,742,167
Total	12,998.67	6,596.24	4,988.27	37,889,603	27,792,072

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466361	0.070248	0.175019	0.170752	0.044803	0.007511	0.012464	0.040207	0.001012	0.001075	0.006379	0.000925	0.003245

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.8193	16.5389	13.8927	0.0992		1.2570	1.2570		1.2570	1.2570		19,846.6392	19,846.6392	0.3804	0.3639	19,967.4225
NaturalGas Unmitigated	1.8193	16.5389	13.8927	0.0992		1.2570	1.2570		1.2570	1.2570		19,846.6392	19,846.6392	0.3804	0.3639	19,967.4225

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	133479	1.4395	13.0862	10.9924	0.0785		0.9946	0.9946		0.9946	0.9946		15,703.3936	15,703.3936	0.3010	0.2879	15,798.9618
Hospital	33373.7	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	1843.92	0.0199	0.1808	0.1519	1.0800e-003		0.0137	0.0137		0.0137	0.0137		216.9318	216.9318	4.1600e-003	3.9800e-003	218.2520
Total		**1.8193**	**16.5389**	**13.8927**	**0.0992**		**1.2570**	**1.2570**		**1.2570**	**1.2570**		**19,846.6392**	**19,846.6392**	**0.3804**	**0.3639**	**19,967.4226**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	33.3737	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	1.84392	0.0199	0.1808	0.1519	1.0800e-003		0.0137	0.0137		0.0137	0.0137		216.9318	216.9318	4.1600e-003	3.9800e-003	218.2520
Hospital	133.479	1.4395	13.0862	10.9924	0.0785		0.9946	0.9946		0.9946	0.9946		15,703.3936	15,703.3936	0.3010	0.2879	15,798.9618
Total		**1.8193**	**16.5389**	**13.8927**	**0.0992**		**1.2570**	**1.2570**		**1.2570**	**1.2570**		**19,846.6392**	**19,846.6392**	**0.3804**	**0.3639**	**19,967.4226**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	15.8707	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Unmitigated	15.8707	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.0718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9000e-003	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Total	**15.8707**	**6.7000e-004**	**0.0683**	**0.0000**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**		**0.1400**	**0.1400**	**4.2000e-004**		**0.1488**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.0718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9000e-003	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Total	**15.8707**	**6.7000e-004**	**0.0683**	**0.0000**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**		**0.1400**	**0.1400**	**4.2000e-004**		**0.1488**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Alternative RCH Baseline Operations

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	373.00	Bed	6.13	328,921.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	184.39	1000sqft	4.23	184,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	297,777.00	328,277.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	893,330.00	984,830.00
tblAreaCoating	Area_Nonresidential_Interior	893330	984830
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35

tblLandscapeEquipment	NumberSummerDays	250	365
tblLandUse	LandUseSquareFeet	266,977.58	328,921.00
tblLandUse	LandUseSquareFeet	184,390.00	184,392.00
tblTripsAndVMT	VendorTripNumber	98.00	108.00
tblTripsAndVMT	WorkerTripNumber	191.00	210.00
tblTripsAndVMT	WorkerTripNumber	38.00	42.00
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.8707	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Energy	1.8193	16.5389	13.8927	0.0992		1.2570	1.2570		1.2570	1.2570		19,846.6392	19,846.6392	0.3804	0.3639	19,967.4225
Mobile	59.7208	194.1000	678.3347	1.3826	94.0612	3.1288	97.1900	25.0998	2.8742	27.9740		127,915.6292	127,915.6292	4.7247		128,014.8473
Total	**77.4108**	**210.6395**	**692.2957**	**1.4819**	**94.0612**	**4.3860**	**98.4472**	**25.0998**	**4.1314**	**29.2312**		**147,762.4084**	**147,762.4084**	**5.1055**	**0.3639**	**147,982.4186**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.8707	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Energy	1.8193	16.5389	13.8927	0.0992		1.2570	1.2570		1.2570	1.2570		19,846.6392	19,846.6392	0.3804	0.3639	19,967.4225
Mobile	54.4193	148.5981	536.0665	1.0241	69.0094	2.3300	71.3394	18.4148	2.1400	20.5549		94,712.8045	94,712.8045	3.5901		94,788.1956
Total	**72.1093**	**165.1377**	**550.0275**	**1.1233**	**69.0094**	**3.5872**	**72.5966**	**18.4148**	**3.3972**	**21.8121**		**114,559.5837**	**114,559.5837**	**3.9709**	**0.3639**	**114,755.7669**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**6.85**	**21.60**	**20.55**	**24.20**	**26.63**	**18.21**	**26.26**	**26.63**	**17.77**	**25.38**	**0.00**	**22.47**	**22.47**	**22.22**	**0.00**	**22.45**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Ride Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	54.4193	148.5981	536.0665	1.0241	69.0094	2.3300	71.3394	18.4148	2.1400	20.5549		94,712.8045	94,712.8045	3.5901		94,788.1956
Unmitigated	59.7208	194.1000	678.3347	1.3826	94.0612	3.1288	97.1900	25.0998	2.8742	27.9740		127,915.6292	127,915.6292	4.7247		128,014.8473

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	3,379.38	2,327.52	2058.96	11,787,471	8,631,162
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	3,450.25	2,129.83	1865.00	11,766,813	8,616,036
Medical Office Building	4,663.22	1,156.13	199.14	9,142,011	6,742,167
Total	12,998.67	6,596.24	4,988.27	37,889,603	27,792,072

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466361	0.070248	0.175019	0.170752	0.044803	0.007511	0.012464	0.040207	0.001012	0.001075	0.006379	0.000925	0.003245

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.8193	16.5389	13.8927	0.0992		1.2570	1.2570		1.2570	1.2570		19,846.6392	19,846.6392	0.3804	0.3639	19,967.4225
NaturalGas Unmitigated	1.8193	16.5389	13.8927	0.0992		1.2570	1.2570		1.2570	1.2570		19,846.6392	19,846.6392	0.3804	0.3639	19,967.4225

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	133479	1.4395	13.0862	10.9924	0.0785		0.9946	0.9946		0.9946	0.9946		15,703.3936	15,703.3936	0.3010	0.2879	15,798.9618
Hospital	33373.7	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	1843.92	0.0199	0.1808	0.1519	1.0800e-003		0.0137	0.0137		0.0137	0.0137		216.9318	216.9318	4.1600e-003	3.9800e-003	218.2520
Total		**1.8193**	**16.5389**	**13.8927**	**0.0992**		**1.2570**	**1.2570**		**1.2570**	**1.2570**		**19,846.6392**	**19,846.6392**	**0.3804**	**0.3639**	**19,967.4226**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	33.3737	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	1.84392	0.0199	0.1808	0.1519	1.0800e-003		0.0137	0.0137		0.0137	0.0137		216.9318	216.9318	4.1600e-003	3.9800e-003	218.2520
Hospital	133.479	1.4395	13.0862	10.9924	0.0785		0.9946	0.9946		0.9946	0.9946		15,703.3936	15,703.3936	0.3010	0.2879	15,798.9618
Total		**1.8193**	**16.5389**	**13.8927**	**0.0992**		**1.2570**	**1.2570**		**1.2570**	**1.2570**		**19,846.6392**	**19,846.6392**	**0.3804**	**0.3639**	**19,967.4226**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	15.8707	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Unmitigated	15.8707	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.0718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9000e-003	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Total	**15.8707**	**6.7000e-004**	**0.0683**	**0.0000**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**		**0.1400**	**0.1400**	**4.2000e-004**		**0.1488**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.0718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.7920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9000e-003	6.7000e-004	0.0683	0.0000		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004		0.1400	0.1400	4.2000e-004		0.1488
Total	**15.8707**	**6.7000e-004**	**0.0683**	**0.0000**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**		**0.1400**	**0.1400**	**4.2000e-004**		**0.1488**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Alternative RCH Baseline Operations

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	373.00	Bed	6.13	328,921.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	184.39	1000sqft	4.23	184,392.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	297,777.00	328,277.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	893,330.00	984,830.00
tblAreaCoating	Area_Nonresidential_Interior	893330	984830
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31

tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365
tblLandUse	LandUseSquareFeet	266,977.58	328,921.00
tblLandUse	LandUseSquareFeet	184,390.00	184,392.00
tblTripsAndVMT	VendorTripNumber	98.00	108.00
tblTripsAndVMT	WorkerTripNumber	191.00	210.00
tblTripsAndVMT	WorkerTripNumber	38.00	42.00
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.8964	1.2000e-004	0.0125	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0232	0.0232	7.0000e-005	0.0000	0.0246
Energy	0.3320	3.0183	2.5354	0.0181		0.2294	0.2294		0.2294	0.2294	0.0000	12,192.1840	12,192.1840	0.2578	0.1006	12,228.7690
Mobile	8.6094	32.0854	100.3011	0.2021	14.3652	0.4862	14.8514	3.8384	0.4466	4.2850	0.0000	16,989.7358	16,989.7358	0.6641	0.0000	17,003.6821
Waste						0.0000	0.0000		0.0000	0.0000	805.6224	0.0000	805.6224	47.6109	0.0000	1,805.4518
Water						0.0000	0.0000		0.0000	0.0000	23.6896	609.4502	633.1399	0.0949	0.0543	651.9576
Total	**11.8378**	**35.1039**	**102.8489**	**0.2202**	**14.3652**	**0.7156**	**15.0808**	**3.8384**	**0.6761**	**4.5145**	**829.3120**	**29,791.3932**	**30,620.7052**	**48.6278**	**0.1548**	**31,689.8850**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.8964	1.2000e-004	0.0125	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0232	0.0232	7.0000e-005	0.0000	0.0246
Energy	0.3320	3.0183	2.5354	0.0181		0.2294	0.2294		0.2294	0.2294	0.0000	12,192.1840	12,192.1840	0.2578	0.1006	12,228.7690
Mobile	7.8097	24.5036	80.8231	0.1497	10.5369	0.3622	10.8991	2.8155	0.3327	3.1482	0.0000	12,580.1977	12,580.1977	0.5044	0.0000	12,590.7896
Waste						0.0000	0.0000		0.0000	0.0000	805.6224	0.0000	805.6224	47.6109	0.0000	1,805.4518
Water						0.0000	0.0000		0.0000	0.0000	23.6896	609.4502	633.1399	0.0944	0.0542	651.9198
Total	**11.0381**	**27.5221**	**83.3710**	**0.1678**	**10.5369**	**0.5917**	**11.1285**	**2.8155**	**0.5621**	**3.3776**	**829.3120**	**25,381.8551**	**26,211.1671**	**48.4676**	**0.1547**	**27,276.9547**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.76**	**21.60**	**18.94**	**23.78**	**26.65**	**17.32**	**26.21**	**26.65**	**16.85**	**25.18**	**0.00**	**14.80**	**14.40**	**0.33**	**0.06**	**13.93**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.8097	24.5036	80.8231	0.1497	10.5369	0.3622	10.8991	2.8155	0.3327	3.1482	0.0000	12,580.1977	12,580.1977	0.5044	0.0000	12,590.7896
Unmitigated	8.6094	32.0854	100.3011	0.2021	14.3652	0.4862	14.8514	3.8384	0.4466	4.2850	0.0000	16,989.7358	16,989.7358	0.6641	0.0000	17,003.6821

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	3,379.38	2,327.52	2058.96	11,787,471	8,631,162
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	3,450.25	2,129.83	1865.00	11,766,813	8,616,036
Medical Office Building	4,663.22	1,156.13	199.14	9,142,011	6,742,167
Total	12,998.67	6,596.24	4,988.27	37,889,603	27,792,072

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466361	0.070248	0.175019	0.170752	0.044803	0.007511	0.012464	0.040207	0.001012	0.001075	0.006379	0.000925	0.003245

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,906.3503	8,906.3503	0.1948	0.0403	8,922.9382
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,906.3503	8,906.3503	0.1948	0.0403	8,922.9382
NaturalGas Mitigated	0.3320	3.0183	2.5354	0.0181		0.2294	0.2294		0.2294	0.2294	0.0000	3,285.8337	3,285.8337	0.0630	0.0602	3,305.8307
NaturalGas Unmitigated	0.3320	3.0183	2.5354	0.0181		0.2294	0.2294		0.2294	0.2294	0.0000	3,285.8337	3,285.8337	0.0630	0.0602	3,305.8307

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	1.21814e+007	0.0657	0.5971	0.5016	3.5800e-003		0.0454	0.0454		0.0454	0.0454	0.0000	650.0453	650.0453	0.0125	0.0119	654.0014
Hospital	4.87198e+007	0.2627	2.3882	2.0061	0.0143		0.1815	0.1815		0.1815	0.1815	0.0000	2,599.8729	2,599.8729	0.0498	0.0477	2,615.6953
Medical Office Building	673031	3.6300e-003	0.0330	0.0277	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	35.9155	35.9155	6.9000e-004	6.6000e-004	36.1341
Total		**0.3320**	**3.0183**	**2.5354**	**0.0181**		**0.2294**	**0.2294**		**0.2294**	**0.2294**	**0.0000**	**3,285.8337**	**3,285.8337**	**0.0630**	**0.0602**	**3,305.8307**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	4.87198e+007	0.2627	2.3882	2.0061	0.0143		0.1815	0.1815		0.1815	0.1815	0.0000	2,599.8729	2,599.8729	0.0498	0.0477	2,615.6953
Medical Office Building	673031	3.6300e-003	0.0330	0.0277	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	35.9155	35.9155	6.9000e-004	6.6000e-004	36.1341
Hospital	1.21814e+007	0.0657	0.5971	0.5016	3.5800e-003		0.0454	0.0454		0.0454	0.0454	0.0000	650.0453	650.0453	0.0125	0.0119	654.0014
Total		**0.3320**	**3.0183**	**2.5354**	**0.0181**		**0.2294**	**0.2294**		**0.2294**	**0.2294**	**0.0000**	**3,285.8337**	**3,285.8337**	**0.0630**	**0.0602**	**3,305.8307**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.02722e+007	6,176.7241	0.1351	0.0280	6,188.2281
Hospital	2.56836e+006	1,544.3641	0.0338	6.9900e-003	1,547.2405
Medical Office Building	1.97115e+006	1,185.2621	0.0259	5.3600e-003	1,187.4696
Total		**8,906.3503**	**0.1948**	**0.0403**	**8,922.9382**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.02722e+007	6,176.7241	0.1351	0.0280	6,188.2281
Hospital	2.56836e+006	1,544.3641	0.0338	6.9900e-003	1,547.2405
Medical Office Building	1.97115e+006	1,185.2621	0.0259	5.3600e-003	1,187.4696
Total		**8,906.3503**	**0.1948**	**0.0403**	**8,922.9382**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.8964	1.2000e-004	0.0125	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0232	0.0232	7.0000e-005	0.0000	0.0246
Unmitigated	2.8964	1.2000e-004	0.0125	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0232	0.0232	7.0000e-005	0.0000	0.0246

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.7431					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1520					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2600e-003	1.2000e-004	0.0125	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0232	0.0232	7.0000e-005	0.0000	0.0246
Total	**2.8964**	**1.2000e-004**	**0.0125**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0232**	**0.0232**	**7.0000e-005**	**0.0000**	**0.0246**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.7431					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1520					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2600e-003	1.2000e-004	0.0125	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0232	0.0232	7.0000e-005	0.0000	0.0246
Total	**2.8964**	**1.2000e-004**	**0.0125**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0232**	**0.0232**	**7.0000e-005**	**0.0000**	**0.0246**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	633.1399	0.0944	0.0542	651.9198
Unmitigated	633.1399	0.0949	0.0543	651.9576

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	10.3195 / 1.96562	97.5800	0.0146	8.3600e-003	100.4802
Hospital	33.5005 / 6.38105	316.7761	0.0475	0.0272	326.1911
Medical Office Building	23.1374 / 4.40712	218.7837	0.0328	0.0188	225.2863
Total		**633.1399**	**0.0949**	**0.0543**	**651.9576**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	10.3195 / 1.96562	97.5800	0.0146	8.3500e-003	100.4744
Hospital	33.5005 / 6.38105	316.7761	0.0472	0.0271	326.1722
Medical Office Building	23.1374 / 4.40712	218.7837	0.0326	0.0187	225.2732
Total		**633.1399**	**0.0944**	**0.0542**	**651.9198**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	805.6224	47.6109	0.0000	1,805.4518
Unmitigated	805.6224	47.6109	0.0000	1,805.4518

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1089.16	221.0896	13.0660	0.0000	495.4761
Hospital	888.19	180.2945	10.6551	0.0000	404.0517
Medical Office Building	1991.41	404.2382	23.8898	0.0000	905.9239
Total		**805.6224**	**47.6109**	**0.0000**	**1,805.4518**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1089.16	221.0896	13.0660	0.0000	495.4761
Hospital	888.19	180.2945	10.6551	0.0000	404.0517
Medical Office Building	1991.41	404.2382	23.8898	0.0000	905.9239
Total		**805.6224**	**47.6109**	**0.0000**	**1,805.4518**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Alternative RCH Expansion Project Phase I Operations

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	562.00	Bed	9.23	580,421.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	245.26	1000sqft	5.63	245,257.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	453,959.00	423,459.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,361,877.00	1,270,377.00
tblAreaCoating	Area_Nonresidential_Interior	1361877	1270377
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35

tblLandscapeEquipment	NumberSummerDays	250	365
tblLandUse	LandUseSquareFeet	402,255.76	580,421.00
tblLandUse	LandUseSquareFeet	245,260.00	245,257.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	VendorTripNumber	149.00	139.00
tblTripsAndVMT	WorkerTripNumber	291.00	271.00
tblTripsAndVMT	WorkerTripNumber	58.00	54.00
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	23.4599	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Energy	2.9265	26.6045	22.3478	0.1596		2.0219	2.0219		2.0219	2.0219		31,925.3942	31,925.3942	0.6119	0.5853	32,119.6868
Mobile	63.0153	213.4149	675.7379	1.8010	130.9979	3.0362	134.0342	34.9604	2.7945	37.7549		153,386.3234	153,386.3234	5.0669		153,492.7282
Total	**89.4017**	**240.0203**	**698.1782**	**1.9606**	**130.9979**	**5.0585**	**136.0565**	**34.9604**	**4.8167**	**39.7772**		**185,311.9122**	**185,311.9122**	**5.6793**	**0.5853**	**185,612.6211**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	23.4599	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Energy	2.9265	26.6045	22.3478	0.1596		2.0219	2.0219		2.0219	2.0219		31,925.3942	31,925.3942	0.6119	0.5853	32,119.6868
Mobile	57.7924	163.7697	548.5353	1.3343	96.1002	2.2678	98.3681	25.6470	2.0872	27.7342		113,608.6178	113,608.6178	3.8423		113,689.3061
Total	**84.1788**	**190.3751**	**570.9756**	**1.4940**	**96.1002**	**4.2901**	**100.3903**	**25.6470**	**4.1095**	**29.7565**		**145,534.2066**	**145,534.2066**	**4.4547**	**0.5853**	**145,809.1990**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.84**	**20.68**	**18.22**	**23.80**	**26.64**	**15.19**	**26.21**	**26.64**	**14.68**	**25.19**	**0.00**	**21.47**	**21.47**	**21.56**	**0.00**	**21.44**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	57.7924	163.7697	548.5353	1.3343	96.1002	2.2678	98.3681	25.6470	2.0872	27.7342		113,608.6178	113,608.6178	3.8423		113,689.3061
Unmitigated	63.0153	213.4149	675.7379	1.8010	130.9979	3.0362	134.0342	34.9604	2.7945	37.7549		153,386.3234	153,386.3234	5.0669		153,492.7282

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	5,091.72	3,506.88	3102.24	17,760,211	13,004,593
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	5,198.50	3,209.02	2810.00	17,729,085	12,981,802
Medical Office Building	6,202.63	1,537.78	264.88	12,159,930	8,967,862
Total	17,998.66	9,236.45	7,042.29	52,842,535	38,756,962

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.003242

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.9265	26.6045	22.3478	0.1596		2.0219	2.0219		2.0219	2.0219		31,925.3942	31,925.3942	0.6119	0.5853	32,119.6868
NaturalGas Unmitigated	2.9265	26.6045	22.3478	0.1596		2.0219	2.0219		2.0219	2.0219		31,925.3942	31,925.3942	0.6119	0.5853	32,119.6868

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	235540	2.5401	23.0921	19.3974	0.1386		1.7550	1.7550		1.7550	1.7550		27,710.5426	27,710.5426	0.5311	0.5080	27,879.1844
Hospital	33373.7	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	2452.57	0.0265	0.2405	0.2020	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.5377	288.5377	5.5300e-003	5.2900e-003	290.2936
Total		**2.9265**	**26.6045**	**22.3478**	**0.1596**		**2.0219**	**2.0219**		**2.0219**	**2.0219**		**31,925.3942**	**31,925.3942**	**0.6119**	**0.5853**	**32,119.6868**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	33.3737	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	2.45257	0.0265	0.2405	0.2020	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.5377	288.5377	5.5300e-003	5.2900e-003	290.2936
Hospital	235.54	2.5401	23.0921	19.3974	0.1386		1.7550	1.7550		1.7550	1.7550		27,710.5426	27,710.5426	0.5311	0.5080	27,879.1844
Total		**2.9265**	**26.6045**	**22.3478**	**0.1596**		**2.0219**	**2.0219**		**2.0219**	**2.0219**		**31,925.3942**	**31,925.3942**	**0.6119**	**0.5853**	**32,119.6868**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	23.4599	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Unmitigated	23.4599	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.4742					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.9768					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.9300e-003	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Total	**23.4599**	**8.8000e-004**	**0.0925**	**1.0000e-005**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**		**0.1947**	**0.1947**	**5.4000e-004**		**0.2061**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.4742					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.9768					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.9300e-003	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Total	**23.4599**	**8.8000e-004**	**0.0925**	**1.0000e-005**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**		**0.1947**	**0.1947**	**5.4000e-004**		**0.2061**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Alternative RCH Expansion Project Phase I Operations

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	562.00	Bed	9.23	580,421.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	245.26	1000sqft	5.63	245,257.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	453,959.00	423,459.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,361,877.00	1,270,377.00
tblAreaCoating	Area_Nonresidential_Interior	1361877	1270377
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35

tblLandscapeEquipment	NumberSummerDays	250	365
tblLandUse	LandUseSquareFeet	402,255.76	580,421.00
tblLandUse	LandUseSquareFeet	245,260.00	245,257.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	VendorTripNumber	149.00	139.00
tblTripsAndVMT	WorkerTripNumber	291.00	271.00
tblTripsAndVMT	WorkerTripNumber	58.00	54.00
tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	23.4599	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Energy	2.9265	26.6045	22.3478	0.1596		2.0219	2.0219		2.0219	2.0219		31,925.3942	31,925.3942	0.6119	0.5853	32,119.6868
Mobile	64.6167	204.7486	724.6691	1.9311	130.9979	3.0253	134.0232	34.9604	2.7844	37.7448		163,840.2673	163,840.2673	5.0606		163,946.5401
Total	**91.0031**	**231.3540**	**747.1094**	**2.0907**	**130.9979**	**5.0475**	**136.0455**	**34.9604**	**4.8066**	**39.7671**		**195,765.8561**	**195,765.8561**	**5.6731**	**0.5853**	**196,066.4329**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	23.4599	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Energy	2.9265	26.6045	22.3478	0.1596		2.0219	2.0219		2.0219	2.0219		31,925.3942	31,925.3942	0.6119	0.5853	32,119.6868
Mobile	59.1410	157.4405	574.8398	1.4301	96.1002	2.2568	98.3571	25.6470	2.0771	27.7241		121,327.0152	121,327.0152	3.8360		121,407.5715
Total	**85.5274**	**184.0459**	**597.2801**	**1.5898**	**96.1002**	**4.2791**	**100.3793**	**25.6470**	**4.0994**	**29.7464**		**153,252.6040**	**153,252.6040**	**4.4485**	**0.5853**	**153,527.4643**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.02**	**20.45**	**20.05**	**23.96**	**26.64**	**15.22**	**26.22**	**26.64**	**14.71**	**25.20**	**0.00**	**21.72**	**21.72**	**21.59**	**0.00**	**21.70**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	59.1410	157.4405	574.8398	1.4301	96.1002	2.2568	98.3571	25.6470	2.0771	27.7241		121,327.0152	121,327.0152	3.8360		121,407.5715
Unmitigated	64.6167	204.7486	724.6691	1.9311	130.9979	3.0253	134.0232	34.9604	2.7844	37.7448		163,840.2673	163,840.2673	5.0606		163,946.5401

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	5,091.72	3,506.88	3102.24	17,760,211	13,004,593
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	5,198.50	3,209.02	2810.00	17,729,085	12,981,802
Medical Office Building	6,202.63	1,537.78	264.88	12,159,930	8,967,862
Total	17,998.66	9,236.45	7,042.29	52,842,535	38,756,962

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.003242

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.9265	26.6045	22.3478	0.1596		2.0219	2.0219		2.0219	2.0219		31,925.3942	31,925.3942	0.6119	0.5853	32,119.6868
NaturalGas Unmitigated	2.9265	26.6045	22.3478	0.1596		2.0219	2.0219		2.0219	2.0219		31,925.3942	31,925.3942	0.6119	0.5853	32,119.6868

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	235540	2.5401	23.0921	19.3974	0.1386		1.7550	1.7550		1.7550	1.7550		27,710.5426	27,710.5426	0.5311	0.5080	27,879.1844
Hospital	33373.7	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	2452.57	0.0265	0.2405	0.2020	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.5377	288.5377	5.5300e-003	5.2900e-003	290.2936
Total		**2.9265**	**26.6045**	**22.3478**	**0.1596**		**2.0219**	**2.0219**		**2.0219**	**2.0219**		**31,925.3942**	**31,925.3942**	**0.6119**	**0.5853**	**32,119.6868**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	33.3737	0.3599	3.2719	2.7484	0.0196		0.2487	0.2487		0.2487	0.2487		3,926.3139	3,926.3139	0.0753	0.0720	3,950.2088
Medical Office Building	2.45257	0.0265	0.2405	0.2020	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.5377	288.5377	5.5300e-003	5.2900e-003	290.2936
Hospital	235.54	2.5401	23.0921	19.3974	0.1386		1.7550	1.7550		1.7550	1.7550		27,710.5426	27,710.5426	0.5311	0.5080	27,879.1844
Total		**2.9265**	**26.6045**	**22.3478**	**0.1596**		**2.0219**	**2.0219**		**2.0219**	**2.0219**		**31,925.3942**	**31,925.3942**	**0.6119**	**0.5853**	**32,119.6868**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	23.4599	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Unmitigated	23.4599	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.4742					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.9768					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.9300e-003	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Total	**23.4599**	**8.8000e-004**	**0.0925**	**1.0000e-005**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**		**0.1947**	**0.1947**	**5.4000e-004**		**0.2061**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.4742					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.9768					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.9300e-003	8.8000e-004	0.0925	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		0.1947	0.1947	5.4000e-004		0.2061
Total	**23.4599**	**8.8000e-004**	**0.0925**	**1.0000e-005**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**		**0.1947**	**0.1947**	**5.4000e-004**		**0.2061**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Alternative RCH Expansion Project Phase I Operations

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	562.00	Bed	9.23	580,421.00	0
Hospital	82.24	1000sqft	1.89	82,240.00	0
Medical Office Building	245.26	1000sqft	5.63	245,257.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.79	7.83
tblEnergyUse	NT24E	5.56	9.09
tblEnergyUse	NT24NG	6.03	11.77
tblEnergyUse	T24E	8.75	14.31
tblEnergyUse	T24NG	69.84	136.35
tblLandscapeEquipment	NumberSummerDays	250	365
tblLandUse	LandUseSquareFeet	402,255.76	580,421.00
tblProjectCharacteristics	OperationalYear	2014	2017

tblVehicleTrips	ST_TR	10.18	6.24
tblVehicleTrips	ST_TR	8.14	5.71
tblVehicleTrips	ST_TR	8.96	6.27
tblVehicleTrips	SU_TR	8.91	5.52
tblVehicleTrips	SU_TR	7.19	5.00
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	16.50	9.06
tblVehicleTrips	WD_TR	11.81	9.25
tblVehicleTrips	WD_TR	36.13	25.29
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.2638	1.6000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0322	0.0322	9.0000e-005	0.0000	0.0341
Energy	0.5341	4.8553	4.0785	0.0291		0.3690	0.3690		0.3690	0.3690	0.0000	19,306.0492	19,306.0492	0.4080	0.1604	19,364.3293
Mobile	9.2955	33.8668	108.0525	0.2828	20.0443	0.4705	20.5148	5.3566	0.4330	5.7896	0.0000	21,838.4108	21,838.4108	0.7129	0.0000	21,853.3808
Waste						0.0000	0.0000		0.0000	0.0000	917.3649	0.0000	917.3649	54.2147	0.0000	2,055.8738
Water						0.0000	0.0000		0.0000	0.0000	29.6896	763.8073	793.4968	0.1189	0.0680	817.0806
Total	**14.0934**	**38.7223**	**112.1479**	**0.3120**	**20.0443**	**0.8396**	**20.8839**	**5.3566**	**0.8021**	**6.1586**	**947.0544**	**41,908.2995**	**42,855.3539**	**55.4546**	**0.2284**	**44,090.6986**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.2638	1.6000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0322	0.0322	9.0000e-005	0.0000	0.0341
Energy	0.5341	4.8553	4.0785	0.0291		0.3690	0.3690		0.3690	0.3690	0.0000	19,306.0492	19,306.0492	0.4080	0.1604	19,364.3293
Mobile	8.4711	25.9715	87.5897	0.2095	14.7014	0.3510	15.0524	3.9287	0.3231	4.2518	0.0000	16,172.1141	16,172.1141	0.5401	0.0000	16,183.4569
Waste						0.0000	0.0000		0.0000	0.0000	917.3649	0.0000	917.3649	54.2147	0.0000	2,055.8738
Water						0.0000	0.0000		0.0000	0.0000	29.6896	763.8073	793.4968	0.1183	0.0679	817.0332
Total	**13.2689**	**30.8270**	**91.6850**	**0.2386**	**14.7014**	**0.7201**	**15.4214**	**3.9287**	**0.6921**	**4.6209**	**947.0544**	**36,242.0027**	**37,189.0572**	**55.2813**	**0.2283**	**38,420.7273**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.85**	**20.39**	**18.25**	**23.51**	**26.66**	**14.23**	**26.16**	**26.66**	**13.71**	**24.97**	**0.00**	**13.52**	**13.22**	**0.31**	**0.05**	**12.86**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Implement Employee Parking CashOut

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.4711	25.9715	87.5897	0.2095	14.7014	0.3510	15.0524	3.9287	0.3231	4.2518	0.0000	16,172.1141	16,172.1141	0.5401	0.0000	16,183.4569
Unmitigated	9.2955	33.8668	108.0525	0.2828	20.0443	0.4705	20.5148	5.3566	0.4330	5.7896	0.0000	21,838.4108	21,838.4108	0.7129	0.0000	21,853.3808

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	745.09	513.18	453.96	2,598,932	1,903,021
Hospital	5,091.72	3,506.88	3102.24	17,760,211	13,004,593
Hospital	760.72	469.59	411.20	2,594,377	1,899,686
Hospital	5,198.50	3,209.02	2810.00	17,729,085	12,981,802
Medical Office Building	6,202.55	1,537.76	264.88	12,159,782	8,967,752
Total	17,998.58	9,236.43	7,042.28	52,842,386	38,756,853

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.003242

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14,020.4421	14,020.4421	0.3067	0.0635	14,046.5549
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14,020.4421	14,020.4421	0.3067	0.0635	14,046.5549
NaturalGas Mitigated	0.5341	4.8553	4.0785	0.0291		0.3690	0.3690		0.3690	0.3690	0.0000	5,285.6071	5,285.6071	0.1013	0.0969	5,317.7744
NaturalGas Unmitigated	0.5341	4.8553	4.0785	0.0291		0.3690	0.3690		0.3690	0.3690	0.0000	5,285.6071	5,285.6071	0.1013	0.0969	5,317.7744

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	1.21814e+007	0.0657	0.5971	0.5016	3.5800e-003		0.0454	0.0454		0.0454	0.0454	0.0000	650.0453	650.0453	0.0125	0.0119	654.0014
Hospital	8.5972e+007	0.4636	4.2143	3.5400	0.0253		0.3203	0.3203		0.3203	0.3203	0.0000	4,587.7911	4,587.7911	0.0879	0.0841	4,615.7116
Medical Office Building	895188	4.8300e-003	0.0439	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.7706	47.7706	9.2000e-004	8.8000e-004	48.0614
Total		**0.5341**	**4.8553**	**4.0785**	**0.0291**		**0.3690**	**0.3690**		**0.3690**	**0.3690**	**0.0000**	**5,285.6071**	**5,285.6071**	**0.1013**	**0.0969**	**5,317.7744**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	8.5972e+007	0.4636	4.2143	3.5400	0.0253		0.3203	0.3203		0.3203	0.3203	0.0000	4,587.7911	4,587.7911	0.0879	0.0841	4,615.7116
Medical Office Building	895188	4.8300e-003	0.0439	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.7706	47.7706	9.2000e-004	8.8000e-004	48.0614
Hospital	1.21814e+007	0.0657	0.5971	0.5016	3.5800e-003		0.0454	0.0454		0.0454	0.0454	0.0000	650.0453	650.0453	0.0125	0.0119	654.0014
Total		**0.5341**	**4.8553**	**4.0785**	**0.0291**		**0.3690**	**0.3690**		**0.3690**	**0.3690**	**0.0000**	**5,285.6071**	**5,285.6071**	**0.1013**	**0.0969**	**5,317.7744**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.81265e+007	10,899.5789	0.2384	0.0493	10,919.8791
Hospital	2.56836e+006	1,544.3641	0.0338	6.9900e-003	1,547.2405
Medical Office Building	2.6218e+006	1,576.4991	0.0345	7.1400e-003	1,579.4353
Total		**14,020.4421**	**0.3067**	**0.0635**	**14,046.5549**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.81265e+007	10,899.5789	0.2384	0.0493	10,919.8791
Hospital	2.56836e+006	1,544.3641	0.0338	6.9900e-003	1,547.2405
Medical Office Building	2.6218e+006	1,576.4991	0.0345	7.1400e-003	1,579.4353
Total		**14,020.4421**	**0.3067**	**0.0635**	**14,046.5549**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.2638	1.6000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0322	0.0322	9.0000e-005	0.0000	0.0341
Unmitigated	4.2638	1.6000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0322	0.0322	9.0000e-005	0.0000	0.0341

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.9814					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2808					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.6300e-003	1.6000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0322	0.0322	9.0000e-005	0.0000	0.0341
Total	**4.2638**	**1.6000e-004**	**0.0169**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0322**	**0.0322**	**9.0000e-005**	**0.0000**	**0.0341**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.9814					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2808					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.6300e-003	1.6000e-004	0.0169	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0322	0.0322	9.0000e-005	0.0000	0.0341
Total	**4.2638**	**1.6000e-004**	**0.0169**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0322**	**0.0322**	**9.0000e-005**	**0.0000**	**0.0341**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	793.4968	0.1183	0.0679	817.0332
Unmitigated	793.4968	0.1189	0.0680	817.0806

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	10.3195 / 1.96562	97.5800	0.0146	8.3600e-003	100.4802
Hospital	50.4753 / 9.61434	477.2874	0.0715	0.0409	491.4729
Medical Office Building	23.121 / 4.40401	218.6295	0.0328	0.0187	225.1274
Total		**793.4968**	**0.1189**	**0.0680**	**817.0805**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	10.3195 / 1.96562	97.5800	0.0146	8.3500e-003	100.4744
Hospital	50.4753 / 9.61434	477.2874	0.0712	0.0409	491.4444
Medical Office Building	23.121 / 4.40401	218.6295	0.0326	0.0187	225.1144
Total		**793.4968**	**0.1183**	**0.0679**	**817.0332**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	917.3649	54.2147	0.0000	2,055.8738
Unmitigated	917.3649	54.2147	0.0000	2,055.8738

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1641.04	333.1163	19.6866	0.0000	746.5351
Hospital	888.19	180.2945	10.6551	0.0000	404.0517
Medical Office Building	1990.01	403.9541	23.8730	0.0000	905.2871
Total		**917.3649**	**54.2147**	**0.0000**	**2,055.8738**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	1641.04	333.1163	19.6866	0.0000	746.5351
Hospital	888.19	180.2945	10.6551	0.0000	404.0517
Medical Office Building	1990.01	403.9541	23.8730	0.0000	905.2871
Total		**917.3649**	**54.2147**	**0.0000**	**2,055.8738**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

RCH Expansion Project Medical Office Building

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	61.00	1000sqft	0.50	61,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Building P, Medical Office Building, 61,000 SF

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	20.00
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	PhaseEndDate	2/13/2014	2/23/2014
tblConstructionPhase	PhaseEndDate	2/28/2014	3/1/2014
tblConstructionPhase	PhaseStartDate	2/7/2014	2/17/2014
tblLandUse	LotAcreage	1.40	0.50

tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Pressure Washers
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblVehicleTrips	ST_TR	8.96	6.26
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	36.13	25.29

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	1.6456	15.9964	10.3102	0.0148	0.2361	1.0669	1.3030	0.0629	0.9815	1.0444	0.0000	1,542.8512	1,542.8512	0.3879	0.0000	1,550.9977
2014	1.5545	15.5668	10.0419	0.0150	0.2361	0.9637	1.1091	0.0629	0.8876	0.9261	0.0000	1,543.4635	1,543.4635	0.4144	0.0000	1,552.1650

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	1.6456	15.9964	10.3102	0.0148	0.2361	1.0669	1.3030	0.0629	0.9815	1.0444	0.0000	1,542.8512	1,542.8512	0.3879	0.0000	1,550.9977
2014	1.5545	15.5668	10.0419	0.0150	0.2361	0.9637	1.1091	0.0629	0.8876	0.9261	0.0000	1,543.4635	1,543.4635	0.4144	0.0000	1,552.1650

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction - Interior	Building Construction	11/1/2013	11/28/2013	5	20	
2	Building Construction - Exterior 1	Building Construction	11/29/2013	1/23/2014	5	40	
3	Building Construction - Exterior 2	Building Construction	1/24/2014	2/6/2014	5	10	
4	Grading	Grading	2/17/2014	2/23/2014	5	5	
5	Paving	Paving	2/24/2014	3/1/2014	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction - Interior	Cranes	1	4.00	226	0.29
Building Construction - Interior	Forklifts	1	6.00	89	0.20
Building Construction - Interior	Rough Terrain Forklifts	1	4.00	100	0.40
Building Construction - Interior	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Exterior 1	Aerial Lifts	1	8.00	62	0.31
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction - Exterior 2	Pressure Washers	1	8.00	13	0.30
Building Construction - Exterior 2	Welders	2	8.00	46	0.45
Grading	Graders	1	8.00	174	0.41
Paving	Rollers	1	7.00	80	0.38
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Cement and Mortar Mixers	1	6.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction - Interior	5	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Exterior 1	1	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Exterior 2	3	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - Interior - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5159	15.6041	8.6709	0.0119		1.0575	1.0575		0.9729	0.9729		1,273.9860	1,273.9860	0.3746		1,281.8521
Total	**1.5159**	**15.6041**	**8.6709**	**0.0119**		**1.0575**	**1.0575**		**0.9729**	**0.9729**		**1,273.9860**	**1,273.9860**	**0.3746**		**1,281.8521**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0264	0.2551	0.2567	4.2000e-004	0.0126	7.7200e-003	0.0203	3.5900e-003	7.0900e-003	0.0107		43.2130	43.2130	4.7000e-004		43.2229
Worker	0.1033	0.1372	1.3827	2.4600e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		225.6522	225.6522	0.0129		225.9227
Total	**0.1297**	**0.3923**	**1.6394**	**2.8800e-003**	**0.2361**	**9.4400e-003**	**0.2456**	**0.0629**	**8.6500e-003**	**0.0715**		**268.8652**	**268.8652**	**0.0134**		**269.1457**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5159	15.6041	8.6709	0.0119		1.0575	1.0575		0.9729	0.9729	0.0000	1,273.9860	1,273.9860	0.3746		1,281.8521
Total	**1.5159**	**15.6041**	**8.6709**	**0.0119**		**1.0575**	**1.0575**		**0.9729**	**0.9729**	**0.0000**	**1,273.9860**	**1,273.9860**	**0.3746**		**1,281.8521**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0264	0.2551	0.2567	4.2000e-004	0.0126	7.7200e-003	0.0203	3.5900e-003	7.0900e-003	0.0107		43.2130	43.2130	4.7000e-004		43.2229
Worker	0.1033	0.1372	1.3827	2.4600e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		225.6522	225.6522	0.0129		225.9227
Total	**0.1297**	**0.3923**	**1.6394**	**2.8800e-003**	**0.2361**	**9.4400e-003**	**0.2456**	**0.0629**	**8.6500e-003**	**0.0715**		**268.8652**	**268.8652**	**0.0134**		**269.1457**

3.3 Building Construction - Exterior 1 - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0817	1.3241	1.0956	1.6400e-003		0.0680	0.0680		0.0625	0.0625		175.0203	175.0203	0.0515		176.1009
Total	**0.0817**	**1.3241**	**1.0956**	**1.6400e-003**		**0.0680**	**0.0680**		**0.0625**	**0.0625**		**175.0203**	**175.0203**	**0.0515**		**176.1009**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0264	0.2551	0.2567	4.2000e-004	0.0126	7.7200e-003	0.0203	3.5900e-003	7.0900e-003	0.0107		43.2130	43.2130	4.7000e-004		43.2229
Worker	0.1033	0.1372	1.3827	2.4600e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		225.6522	225.6522	0.0129		225.9227
Total	**0.1297**	**0.3923**	**1.6394**	**2.8800e-003**	**0.2361**	**9.4400e-003**	**0.2456**	**0.0629**	**8.6500e-003**	**0.0715**		**268.8652**	**268.8652**	**0.0134**		**269.1457**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0817	1.3241	1.0956	1.6400e-003		0.0680	0.0680		0.0625	0.0625	0.0000	175.0203	175.0203	0.0515		176.1009
Total	**0.0817**	**1.3241**	**1.0956**	**1.6400e-003**		**0.0680**	**0.0680**		**0.0625**	**0.0625**	**0.0000**	**175.0203**	**175.0203**	**0.0515**		**176.1009**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0264	0.2551	0.2567	4.2000e-004	0.0126	7.7200e-003	0.0203	3.5900e-003	7.0900e-003	0.0107		43.2130	43.2130	4.7000e-004		43.2229
Worker	0.1033	0.1372	1.3827	2.4600e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		225.6522	225.6522	0.0129		225.9227
Total	**0.1297**	**0.3923**	**1.6394**	**2.8800e-003**	**0.2361**	**9.4400e-003**	**0.2456**	**0.0629**	**8.6500e-003**	**0.0715**		**268.8652**	**268.8652**	**0.0134**		**269.1457**

3.3 Building Construction - Exterior 1 - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0682	1.1367	1.0850	1.6400e-003		0.0542	0.0542		0.0499	0.0499		174.1363	174.1363	0.0515		175.2170
Total	**0.0682**	**1.1367**	**1.0850**	**1.6400e-003**		**0.0542**	**0.0542**		**0.0499**	**0.0499**		**174.1363**	**174.1363**	**0.0515**		**175.2170**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.2265	0.2300	4.2000e-004	0.0126	5.0100e-003	0.0176	3.5900e-003	4.6100e-003	8.2000e-003		43.0101	43.0101	3.7000e-004		43.0179
Worker	0.0916	0.1216	1.2269	2.4600e-003	0.2236	1.5700e-003	0.2251	0.0593	1.4300e-003	0.0607		219.2843	219.2843	0.0116		219.5285
Total	**0.1133**	**0.3481**	**1.4569**	**2.8800e-003**	**0.2361**	**6.5800e-003**	**0.2427**	**0.0629**	**6.0400e-003**	**0.0689**		**262.2944**	**262.2944**	**0.0120**		**262.5464**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0682	1.1367	1.0850	1.6400e-003		0.0542	0.0542		0.0499	0.0499	0.0000	174.1363	174.1363	0.0515		175.2170
Total	**0.0682**	**1.1367**	**1.0850**	**1.6400e-003**		**0.0542**	**0.0542**		**0.0499**	**0.0499**	**0.0000**	**174.1363**	**174.1363**	**0.0515**		**175.2170**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.2265	0.2300	4.2000e-004	0.0126	5.0100e-003	0.0176	3.5900e-003	4.6100e-003	8.2000e-003		43.0101	43.0101	3.7000e-004		43.0179
Worker	0.0916	0.1216	1.2269	2.4600e-003	0.2236	1.5700e-003	0.2251	0.0593	1.4300e-003	0.0607		219.2843	219.2843	0.0116		219.5285
Total	**0.1133**	**0.3481**	**1.4569**	**2.8800e-003**	**0.2361**	**6.5800e-003**	**0.2427**	**0.0629**	**6.0400e-003**	**0.0689**		**262.2944**	**262.2944**	**0.0120**		**262.5464**

3.4 Building Construction - Exterior 2 - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4412	4.2451	4.4538	5.6600e-003		0.3659	0.3659		0.3659	0.3659		454.0462	454.0462	0.1297		456.7694
Total	**1.4412**	**4.2451**	**4.4538**	**5.6600e-003**		**0.3659**	**0.3659**		**0.3659**	**0.3659**		**454.0462**	**454.0462**	**0.1297**		**456.7694**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.2265	0.2300	4.2000e-004	0.0126	5.0100e-003	0.0176	3.5900e-003	4.6100e-003	8.2000e-003		43.0101	43.0101	3.7000e-004		43.0179
Worker	0.0916	0.1216	1.2269	2.4600e-003	0.2236	1.5700e-003	0.2251	0.0593	1.4300e-003	0.0607		219.2843	219.2843	0.0116		219.5285
Total	**0.1133**	**0.3481**	**1.4569**	**2.8800e-003**	**0.2361**	**6.5800e-003**	**0.2427**	**0.0629**	**6.0400e-003**	**0.0689**		**262.2944**	**262.2944**	**0.0120**		**262.5464**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4412	4.2451	4.4538	5.6600e-003		0.3659	0.3659		0.3659	0.3659	0.0000	454.0462	454.0462	0.1297		456.7694
Total	**1.4412**	**4.2451**	**4.4538**	**5.6600e-003**		**0.3659**	**0.3659**		**0.3659**	**0.3659**	**0.0000**	**454.0462**	**454.0462**	**0.1297**		**456.7694**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.2265	0.2300	4.2000e-004	0.0126	5.0100e-003	0.0176	3.5900e-003	4.6100e-003	8.2000e-003		43.0101	43.0101	3.7000e-004		43.0179
Worker	0.0916	0.1216	1.2269	2.4600e-003	0.2236	1.5700e-003	0.2251	0.0593	1.4300e-003	0.0607		219.2843	219.2843	0.0116		219.5285
Total	**0.1133**	**0.3481**	**1.4569**	**2.8800e-003**	**0.2361**	**6.5800e-003**	**0.2427**	**0.0629**	**6.0400e-003**	**0.0689**		**262.2944**	**262.2944**	**0.0120**		**262.5464**

3.5 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.4341	14.4817	7.3936	9.3700e-003		0.8920	0.8920		0.8206	0.8206		995.1971	995.1971	0.2941		1,001.3730
Total	**1.4341**	**14.4817**	**7.3936**	**9.3700e-003**	**0.0000**	**0.8920**	**0.8920**	**0.0000**	**0.8206**	**0.8206**		**995.1971**	**995.1971**	**0.2941**		**1,001.3730**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0229	0.0304	0.3067	6.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		54.8211	54.8211	2.9100e-003		54.8821
Total	**0.0229**	**0.0304**	**0.3067**	**6.2000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**54.8211**	**54.8211**	**2.9100e-003**		**54.8821**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.4341	14.4817	7.3936	9.3700e-003		0.8920	0.8920		0.8206	0.8206	0.0000	995.1971	995.1971	0.2941		1,001.3730
Total	**1.4341**	**14.4817**	**7.3936**	**9.3700e-003**	**0.0000**	**0.8920**	**0.8920**	**0.0000**	**0.8206**	**0.8206**	**0.0000**	**995.1971**	**995.1971**	**0.2941**		**1,001.3730**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0229	0.0304	0.3067	6.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		54.8211	54.8211	2.9100e-003		54.8821
Total	**0.0229**	**0.0304**	**0.3067**	**6.2000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**54.8211**	**54.8211**	**2.9100e-003**		**54.8821**

3.6 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4881	15.4878	9.2444	0.0134		0.9627	0.9627		0.8867	0.8867		1,400.9288	1,400.9288	0.4068		1,409.4714
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4881**	**15.4878**	**9.2444**	**0.0134**		**0.9627**	**0.9627**		**0.8867**	**0.8867**		**1,400.9288**	**1,400.9288**	**0.4068**		**1,409.4714**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0596	0.0790	0.7975	1.6000e-003	0.1453	1.0200e-003	0.1463	0.0385	9.3000e-004	0.0395		142.5348	142.5348	7.5600e-003		142.6935
Total	**0.0596**	**0.0790**	**0.7975**	**1.6000e-003**	**0.1453**	**1.0200e-003**	**0.1463**	**0.0385**	**9.3000e-004**	**0.0395**		**142.5348**	**142.5348**	**7.5600e-003**		**142.6935**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4881	15.4878	9.2444	0.0134		0.9627	0.9627		0.8867	0.8867	0.0000	1,400.9288	1,400.9288	0.4068		1,409.4714
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4881**	**15.4878**	**9.2444**	**0.0134**		**0.9627**	**0.9627**		**0.8867**	**0.8867**	**0.0000**	**1,400.9288**	**1,400.9288**	**0.4068**		**1,409.4714**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0596	0.0790	0.7975	1.6000e-003	0.1453	1.0200e-003	0.1463	0.0385	9.3000e-004	0.0395		142.5348	142.5348	7.5600e-003		142.6935
Total	**0.0596**	**0.0790**	**0.7975**	**1.6000e-003**	**0.1453**	**1.0200e-003**	**0.1463**	**0.0385**	**9.3000e-004**	**0.0395**		**142.5348**	**142.5348**	**7.5600e-003**		**142.6935**

RCH Expansion Project Medical Office Building

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	61.00	1000sqft	0.50	61,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Building P, Medical Office Building, 61,000 SF

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	20.00
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	PhaseEndDate	2/13/2014	2/23/2014
tblConstructionPhase	PhaseEndDate	2/28/2014	3/1/2014
tblConstructionPhase	PhaseStartDate	2/7/2014	2/17/2014
tblLandUse	LotAcreage	1.40	0.50

tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Pressure Washers
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblVehicleTrips	ST_TR	8.96	6.26
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	36.13	25.29

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	1.6483	15.9807	10.4970	0.0151	0.2361	1.0668	1.3030	0.0629	0.9815	1.0443	0.0000	1,564.4062	1,564.4062	0.3879	0.0000	1,572.5525
2014	1.5572	15.5619	10.1651	0.0151	0.2361	0.9637	1.1091	0.0629	0.8876	0.9261	0.0000	1,556.8700	1,556.8700	0.4144	0.0000	1,565.5714

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	1.6483	15.9807	10.4970	0.0151	0.2361	1.0668	1.3030	0.0629	0.9815	1.0443	0.0000	1,564.4062	1,564.4062	0.3879	0.0000	1,572.5525
2014	1.5572	15.5619	10.1651	0.0151	0.2361	0.9637	1.1091	0.0629	0.8876	0.9261	0.0000	1,556.8700	1,556.8700	0.4144	0.0000	1,565.5714

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction - Interior	Building Construction	11/1/2013	11/28/2013	5	20	
2	Building Construction - Exterior 1	Building Construction	11/29/2013	1/23/2014	5	40	
3	Building Construction - Exterior 2	Building Construction	1/24/2014	2/6/2014	5	10	
4	Grading	Grading	2/17/2014	2/23/2014	5	5	
5	Paving	Paving	2/24/2014	3/1/2014	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction - Interior	Cranes	1	4.00	226	0.29
Building Construction - Interior	Forklifts	1	6.00	89	0.20
Building Construction - Interior	Rough Terrain Forklifts	1	4.00	100	0.40
Building Construction - Interior	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Exterior 1	Aerial Lifts	1	8.00	62	0.31
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction - Exterior 2	Pressure Washers	1	8.00	13	0.30
Building Construction - Exterior 2	Welders	2	8.00	46	0.45
Grading	Graders	1	8.00	174	0.41
Paving	Rollers	1	7.00	80	0.38
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Cement and Mortar Mixers	1	6.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction - Interior	5	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Exterior 1	1	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Exterior 2	3	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - Interior - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5159	15.6041	8.6709	0.0119		1.0575	1.0575		0.9729	0.9729		1,273.9860	1,273.9860	0.3746		1,281.8521
Total	**1.5159**	**15.6041**	**8.6709**	**0.0119**		**1.0575**	**1.0575**		**0.9729**	**0.9729**		**1,273.9860**	**1,273.9860**	**0.3746**		**1,281.8521**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0248	0.2481	0.2334	4.2000e-004	0.0126	7.6300e-003	0.0202	3.5900e-003	7.0200e-003	0.0106		43.5818	43.5818	4.6000e-004		43.5914
Worker	0.1075	0.1285	1.5927	2.7000e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		246.8385	246.8385	0.0129		247.1090
Total	**0.1324**	**0.3766**	**1.8262**	**3.1200e-003**	**0.2361**	**9.3500e-003**	**0.2455**	**0.0629**	**8.5800e-003**	**0.0715**		**290.4202**	**290.4202**	**0.0133**		**290.7004**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5159	15.6041	8.6709	0.0119		1.0575	1.0575		0.9729	0.9729	0.0000	1,273.9860	1,273.9860	0.3746		1,281.8521
Total	**1.5159**	**15.6041**	**8.6709**	**0.0119**		**1.0575**	**1.0575**		**0.9729**	**0.9729**	**0.0000**	**1,273.9860**	**1,273.9860**	**0.3746**		**1,281.8521**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0248	0.2481	0.2334	4.2000e-004	0.0126	7.6300e-003	0.0202	3.5900e-003	7.0200e-003	0.0106		43.5818	43.5818	4.6000e-004		43.5914
Worker	0.1075	0.1285	1.5927	2.7000e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		246.8385	246.8385	0.0129		247.1090
Total	**0.1324**	**0.3766**	**1.8262**	**3.1200e-003**	**0.2361**	**9.3500e-003**	**0.2455**	**0.0629**	**8.5800e-003**	**0.0715**		**290.4202**	**290.4202**	**0.0133**		**290.7004**

3.3 Building Construction - Exterior 1 - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0817	1.3241	1.0956	1.6400e-003		0.0680	0.0680		0.0625	0.0625		175.0203	175.0203	0.0515		176.1009
Total	**0.0817**	**1.3241**	**1.0956**	**1.6400e-003**		**0.0680**	**0.0680**		**0.0625**	**0.0625**		**175.0203**	**175.0203**	**0.0515**		**176.1009**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0248	0.2481	0.2334	4.2000e-004	0.0126	7.6300e-003	0.0202	3.5900e-003	7.0200e-003	0.0106		43.5818	43.5818	4.6000e-004		43.5914
Worker	0.1075	0.1285	1.5927	2.7000e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		246.8385	246.8385	0.0129		247.1090
Total	**0.1324**	**0.3766**	**1.8262**	**3.1200e-003**	**0.2361**	**9.3500e-003**	**0.2455**	**0.0629**	**8.5800e-003**	**0.0715**		**290.4202**	**290.4202**	**0.0133**		**290.7004**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0817	1.3241	1.0956	1.6400e-003		0.0680	0.0680		0.0625	0.0625	0.0000	175.0203	175.0203	0.0515		176.1009
Total	**0.0817**	**1.3241**	**1.0956**	**1.6400e-003**		**0.0680**	**0.0680**		**0.0625**	**0.0625**	**0.0000**	**175.0203**	**175.0203**	**0.0515**		**176.1009**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0248	0.2481	0.2334	4.2000e-004	0.0126	7.6300e-003	0.0202	3.5900e-003	7.0200e-003	0.0106		43.5818	43.5818	4.6000e-004		43.5914
Worker	0.1075	0.1285	1.5927	2.7000e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		246.8385	246.8385	0.0129		247.1090
Total	**0.1324**	**0.3766**	**1.8262**	**3.1200e-003**	**0.2361**	**9.3500e-003**	**0.2455**	**0.0629**	**8.5800e-003**	**0.0715**		**290.4202**	**290.4202**	**0.0133**		**290.7004**

3.3 Building Construction - Exterior 1 - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0682	1.1367	1.0850	1.6400e-003		0.0542	0.0542		0.0499	0.0499		174.1363	174.1363	0.0515		175.2170
Total	**0.0682**	**1.1367**	**1.0850**	**1.6400e-003**		**0.0542**	**0.0542**		**0.0499**	**0.0499**		**174.1363**	**174.1363**	**0.0515**		**175.2170**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0204	0.2205	0.2067	4.2000e-004	0.0126	4.9500e-003	0.0175	3.5900e-003	4.5500e-003	8.1500e-003		43.3792	43.3792	3.6000e-004		43.3867
Worker	0.0956	0.1139	1.4164	2.7000e-003	0.2236	1.5700e-003	0.2251	0.0593	1.4300e-003	0.0607		239.9096	239.9096	0.0116		240.1539
Total	**0.1160**	**0.3345**	**1.6231**	**3.1200e-003**	**0.2361**	**6.5200e-003**	**0.2427**	**0.0629**	**5.9800e-003**	**0.0689**		**283.2888**	**283.2888**	**0.0120**		**283.5406**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0682	1.1367	1.0850	1.6400e-003		0.0542	0.0542		0.0499	0.0499	0.0000	174.1363	174.1363	0.0515		175.2170
Total	**0.0682**	**1.1367**	**1.0850**	**1.6400e-003**		**0.0542**	**0.0542**		**0.0499**	**0.0499**	**0.0000**	**174.1363**	**174.1363**	**0.0515**		**175.2170**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0204	0.2205	0.2067	4.2000e-004	0.0126	4.9500e-003	0.0175	3.5900e-003	4.5500e-003	8.1500e-003		43.3792	43.3792	3.6000e-004		43.3867
Worker	0.0956	0.1139	1.4164	2.7000e-003	0.2236	1.5700e-003	0.2251	0.0593	1.4300e-003	0.0607		239.9096	239.9096	0.0116		240.1539
Total	**0.1160**	**0.3345**	**1.6231**	**3.1200e-003**	**0.2361**	**6.5200e-003**	**0.2427**	**0.0629**	**5.9800e-003**	**0.0689**		**283.2888**	**283.2888**	**0.0120**		**283.5406**

3.4 Building Construction - Exterior 2 - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4412	4.2451	4.4538	5.6600e-003		0.3659	0.3659		0.3659	0.3659		454.0462	454.0462	0.1297		456.7694
Total	**1.4412**	**4.2451**	**4.4538**	**5.6600e-003**		**0.3659**	**0.3659**		**0.3659**	**0.3659**		**454.0462**	**454.0462**	**0.1297**		**456.7694**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0204	0.2205	0.2067	4.2000e-004	0.0126	4.9500e-003	0.0175	3.5900e-003	4.5500e-003	8.1500e-003		43.3792	43.3792	3.6000e-004		43.3867
Worker	0.0956	0.1139	1.4164	2.7000e-003	0.2236	1.5700e-003	0.2251	0.0593	1.4300e-003	0.0607		239.9096	239.9096	0.0116		240.1539
Total	**0.1160**	**0.3345**	**1.6231**	**3.1200e-003**	**0.2361**	**6.5200e-003**	**0.2427**	**0.0629**	**5.9800e-003**	**0.0689**		**283.2888**	**283.2888**	**0.0120**		**283.5406**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4412	4.2451	4.4538	5.6600e-003		0.3659	0.3659		0.3659	0.3659	0.0000	454.0462	454.0462	0.1297		456.7694
Total	**1.4412**	**4.2451**	**4.4538**	**5.6600e-003**		**0.3659**	**0.3659**		**0.3659**	**0.3659**	**0.0000**	**454.0462**	**454.0462**	**0.1297**		**456.7694**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0204	0.2205	0.2067	4.2000e-004	0.0126	4.9500e-003	0.0175	3.5900e-003	4.5500e-003	8.1500e-003		43.3792	43.3792	3.6000e-004		43.3867
Worker	0.0956	0.1139	1.4164	2.7000e-003	0.2236	1.5700e-003	0.2251	0.0593	1.4300e-003	0.0607		239.9096	239.9096	0.0116		240.1539
Total	**0.1160**	**0.3345**	**1.6231**	**3.1200e-003**	**0.2361**	**6.5200e-003**	**0.2427**	**0.0629**	**5.9800e-003**	**0.0689**		**283.2888**	**283.2888**	**0.0120**		**283.5406**

3.5 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.4341	14.4817	7.3936	9.3700e-003		0.8920	0.8920		0.8206	0.8206		995.1971	995.1971	0.2941		1,001.3730
Total	**1.4341**	**14.4817**	**7.3936**	**9.3700e-003**	**0.0000**	**0.8920**	**0.8920**	**0.0000**	**0.8206**	**0.8206**		**995.1971**	**995.1971**	**0.2941**		**1,001.3730**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0285	0.3541	6.7000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		59.9774	59.9774	2.9100e-003		60.0385
Total	**0.0239**	**0.0285**	**0.3541**	**6.7000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**59.9774**	**59.9774**	**2.9100e-003**		**60.0385**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.4341	14.4817	7.3936	9.3700e-003		0.8920	0.8920		0.8206	0.8206	0.0000	995.1971	995.1971	0.2941		1,001.3730
Total	**1.4341**	**14.4817**	**7.3936**	**9.3700e-003**	**0.0000**	**0.8920**	**0.8920**	**0.0000**	**0.8206**	**0.8206**	**0.0000**	**995.1971**	**995.1971**	**0.2941**		**1,001.3730**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0285	0.3541	6.7000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		59.9774	59.9774	2.9100e-003		60.0385
Total	**0.0239**	**0.0285**	**0.3541**	**6.7000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**59.9774**	**59.9774**	**2.9100e-003**		**60.0385**

3.6 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4881	15.4878	9.2444	0.0134		0.9627	0.9627		0.8867	0.8867		1,400.9288	1,400.9288	0.4068		1,409.4714
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4881**	**15.4878**	**9.2444**	**0.0134**		**0.9627**	**0.9627**		**0.8867**	**0.8867**		**1,400.9288**	**1,400.9288**	**0.4068**		**1,409.4714**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0622	0.0741	0.9207	1.7500e-003	0.1453	1.0200e-003	0.1463	0.0385	9.3000e-004	0.0395		155.9413	155.9413	7.5600e-003		156.1000
Total	**0.0622**	**0.0741**	**0.9207**	**1.7500e-003**	**0.1453**	**1.0200e-003**	**0.1463**	**0.0385**	**9.3000e-004**	**0.0395**		**155.9413**	**155.9413**	**7.5600e-003**		**156.1000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4881	15.4878	9.2444	0.0134		0.9627	0.9627		0.8867	0.8867	0.0000	1,400.9288	1,400.9288	0.4068		1,409.4714
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4881**	**15.4878**	**9.2444**	**0.0134**		**0.9627**	**0.9627**		**0.8867**	**0.8867**	**0.0000**	**1,400.9288**	**1,400.9288**	**0.4068**		**1,409.4714**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0622	0.0741	0.9207	1.7500e-003	0.1453	1.0200e-003	0.1463	0.0385	9.3000e-004	0.0395		155.9413	155.9413	7.5600e-003		156.1000
Total	**0.0622**	**0.0741**	**0.9207**	**1.7500e-003**	**0.1453**	**1.0200e-003**	**0.1463**	**0.0385**	**9.3000e-004**	**0.0395**		**155.9413**	**155.9413**	**7.5600e-003**		**156.1000**

RCH Expansion Project Medical Office Building

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	61.00	1000sqft	0.50	61,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Building P, Medical Office Building, 61,000 SF

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	20.00
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	PhaseEndDate	2/13/2014	2/23/2014
tblConstructionPhase	PhaseEndDate	2/28/2014	3/1/2014
tblConstructionPhase	PhaseStartDate	2/7/2014	2/17/2014
tblLandUse	LotAcreage	1.40	0.50

tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Pressure Washers
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblTripsAndVMT	VendorTripNumber	10.00	2.00
tblVehicleTrips	ST_TR	8.96	6.26
tblVehicleTrips	SU_TR	1.55	1.08
tblVehicleTrips	WD_TR	36.13	25.29

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	0.0188	0.1799	0.1358	2.0000e-004	4.9900e-003	0.0116	0.0166	1.3300e-003	0.0106	0.0120	0.0000	18.6913	18.6913	4.2000e-003	0.0000	18.7794
2014	0.0167	0.1109	0.0963	1.4000e-004	3.6300e-003	7.0200e-003	0.0107	9.7000e-004	6.6100e-003	7.5700e-003	0.0000	12.5418	12.5418	2.7500e-003	0.0000	12.5994
Total	**0.0355**	**0.2909**	**0.2321**	**3.4000e-004**	**8.6200e-003**	**0.0186**	**0.0272**	**2.3000e-003**	**0.0172**	**0.0195**	**0.0000**	**31.2331**	**31.2331**	**6.9500e-003**	**0.0000**	**31.3789**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	0.0188	0.1799	0.1358	2.0000e-004	4.9900e-003	0.0116	0.0166	1.3300e-003	0.0106	0.0120	0.0000	18.6913	18.6913	4.2000e-003	0.0000	18.7794
2014	0.0167	0.1109	0.0963	1.4000e-004	3.6300e-003	7.0200e-003	0.0107	9.7000e-004	6.6100e-003	7.5700e-003	0.0000	12.5418	12.5418	2.7500e-003	0.0000	12.5994
Total	**0.0355**	**0.2909**	**0.2321**	**3.4000e-004**	**8.6200e-003**	**0.0186**	**0.0272**	**2.3000e-003**	**0.0172**	**0.0195**	**0.0000**	**31.2331**	**31.2331**	**6.9500e-003**	**0.0000**	**31.3788**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Building Construction - Interior	Building Construction	11/1/2013	11/28/2013	5	20	
2	Building Construction - Exterior 1	Building Construction	11/29/2013	1/23/2014	5	40	
3	Building Construction - Exterior 2	Building Construction	1/24/2014	2/6/2014	5	10	
4	Grading	Grading	2/17/2014	2/23/2014	5	5	
5	Paving	Paving	2/24/2014	3/1/2014	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction - Interior	Cranes	1	4.00	226	0.29
Building Construction - Interior	Forklifts	1	6.00	89	0.20
Building Construction - Interior	Rough Terrain Forklifts	1	4.00	100	0.40
Building Construction - Interior	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Exterior 1	Aerial Lifts	1	8.00	62	0.31
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction - Exterior 2	Pressure Washers	1	8.00	13	0.30
Building Construction - Exterior 2	Welders	2	8.00	46	0.45
Grading	Graders	1	8.00	174	0.41
Paving	Rollers	1	7.00	80	0.38
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Cement and Mortar Mixers	1	6.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction - Interior	5	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Exterior 1	1	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Exterior 2	3	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - Interior - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0152	0.1560	0.0867	1.2000e-004		0.0106	0.0106		9.7300e-003	9.7300e-003	0.0000	11.5574	11.5574	3.4000e-003	0.0000	11.6288
Total	**0.0152**	**0.1560**	**0.0867**	**1.2000e-004**		**0.0106**	**0.0106**		**9.7300e-003**	**9.7300e-003**	**0.0000**	**11.5574**	**11.5574**	**3.4000e-003**	**0.0000**	**11.6288**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6000e-004	2.6000e-003	2.6300e-003	0.0000	1.2000e-004	8.0000e-005	2.0000e-004	4.0000e-005	7.0000e-005	1.1000e-004	0.0000	0.3940	0.3940	0.0000	0.0000	0.3941
Worker	9.8000e-004	1.4300e-003	0.0144	2.0000e-005	2.2000e-003	2.0000e-005	2.2200e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	2.0749	2.0749	1.2000e-004	0.0000	2.0773
Total	**1.2400e-003**	**4.0300e-003**	**0.0170**	**2.0000e-005**	**2.3200e-003**	**1.0000e-004**	**2.4200e-003**	**6.2000e-004**	**9.0000e-005**	**7.1000e-004**	**0.0000**	**2.4688**	**2.4688**	**1.2000e-004**	**0.0000**	**2.4714**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0152	0.1560	0.0867	1.2000e-004		0.0106	0.0106		9.7300e-003	9.7300e-003	0.0000	11.5574	11.5574	3.4000e-003	0.0000	11.6288
Total	**0.0152**	**0.1560**	**0.0867**	**1.2000e-004**		**0.0106**	**0.0106**		**9.7300e-003**	**9.7300e-003**	**0.0000**	**11.5574**	**11.5574**	**3.4000e-003**	**0.0000**	**11.6288**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6000e-004	2.6000e-003	2.6300e-003	0.0000	1.2000e-004	8.0000e-005	2.0000e-004	4.0000e-005	7.0000e-005	1.1000e-004	0.0000	0.3940	0.3940	0.0000	0.0000	0.3941
Worker	9.8000e-004	1.4300e-003	0.0144	2.0000e-005	2.2000e-003	2.0000e-005	2.2200e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	2.0749	2.0749	1.2000e-004	0.0000	2.0773
Total	**1.2400e-003**	**4.0300e-003**	**0.0170**	**2.0000e-005**	**2.3200e-003**	**1.0000e-004**	**2.4200e-003**	**6.2000e-004**	**9.0000e-005**	**7.1000e-004**	**0.0000**	**2.4688**	**2.4688**	**1.2000e-004**	**0.0000**	**2.4714**

3.3 Building Construction - Exterior 1 - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.4000e-004	0.0152	0.0126	2.0000e-005		7.8000e-004	7.8000e-004		7.2000e-004	7.2000e-004	0.0000	1.8259	1.8259	5.4000e-004	0.0000	1.8372
Total	**9.4000e-004**	**0.0152**	**0.0126**	**2.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.2000e-004**	**7.2000e-004**	**0.0000**	**1.8259**	**1.8259**	**5.4000e-004**	**0.0000**	**1.8372**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	2.9900e-003	3.0200e-003	0.0000	1.4000e-004	9.0000e-005	2.3000e-004	4.0000e-005	8.0000e-005	1.2000e-004	0.0000	0.4531	0.4531	0.0000	0.0000	0.4532
Worker	1.1200e-003	1.6400e-003	0.0165	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.3861	2.3861	1.3000e-004	0.0000	2.3889
Total	**1.4200e-003**	**4.6300e-003**	**0.0195**	**3.0000e-005**	**2.6700e-003**	**1.1000e-004**	**2.7800e-003**	**7.1000e-004**	**1.0000e-004**	**8.1000e-004**	**0.0000**	**2.8392**	**2.8392**	**1.3000e-004**	**0.0000**	**2.8421**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.4000e-004	0.0152	0.0126	2.0000e-005		7.8000e-004	7.8000e-004		7.2000e-004	7.2000e-004	0.0000	1.8259	1.8259	5.4000e-004	0.0000	1.8372
Total	**9.4000e-004**	**0.0152**	**0.0126**	**2.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.2000e-004**	**7.2000e-004**	**0.0000**	**1.8259**	**1.8259**	**5.4000e-004**	**0.0000**	**1.8372**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	2.9900e-003	3.0200e-003	0.0000	1.4000e-004	9.0000e-005	2.3000e-004	4.0000e-005	8.0000e-005	1.2000e-004	0.0000	0.4531	0.4531	0.0000	0.0000	0.4532
Worker	1.1200e-003	1.6400e-003	0.0165	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.3861	2.3861	1.3000e-004	0.0000	2.3889
Total	**1.4200e-003**	**4.6300e-003**	**0.0195**	**3.0000e-005**	**2.6700e-003**	**1.1000e-004**	**2.7800e-003**	**7.1000e-004**	**1.0000e-004**	**8.1000e-004**	**0.0000**	**2.8392**	**2.8392**	**1.3000e-004**	**0.0000**	**2.8421**

3.3 Building Construction - Exterior 1 - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.8000e-004	9.6600e-003	9.2200e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.2000e-004	4.2000e-004	0.0000	1.3428	1.3428	4.0000e-004	0.0000	1.3511
Total	**5.8000e-004**	**9.6600e-003**	**9.2200e-003**	**1.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**1.3428**	**1.3428**	**4.0000e-004**	**0.0000**	**1.3511**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-004	1.9600e-003	2.0100e-003	0.0000	1.1000e-004	4.0000e-005	1.5000e-004	3.0000e-005	4.0000e-005	7.0000e-005	0.0000	0.3333	0.3333	0.0000	0.0000	0.3334
Worker	7.3000e-004	1.0800e-003	0.0108	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.7139	1.7139	9.0000e-005	0.0000	1.7158
Total	**9.1000e-004**	**3.0400e-003**	**0.0128**	**2.0000e-005**	**1.9800e-003**	**5.0000e-005**	**2.0300e-003**	**5.3000e-004**	**5.0000e-005**	**5.8000e-004**	**0.0000**	**2.0472**	**2.0472**	**9.0000e-005**	**0.0000**	**2.0492**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.8000e-004	9.6600e-003	9.2200e-003	1.0000e-005		4.6000e-004	4.6000e-004		4.2000e-004	4.2000e-004	0.0000	1.3428	1.3428	4.0000e-004	0.0000	1.3511
Total	**5.8000e-004**	**9.6600e-003**	**9.2200e-003**	**1.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**1.3428**	**1.3428**	**4.0000e-004**	**0.0000**	**1.3511**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-004	1.9600e-003	2.0100e-003	0.0000	1.1000e-004	4.0000e-005	1.5000e-004	3.0000e-005	4.0000e-005	7.0000e-005	0.0000	0.3333	0.3333	0.0000	0.0000	0.3334
Worker	7.3000e-004	1.0800e-003	0.0108	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.7139	1.7139	9.0000e-005	0.0000	1.7158
Total	**9.1000e-004**	**3.0400e-003**	**0.0128**	**2.0000e-005**	**1.9800e-003**	**5.0000e-005**	**2.0300e-003**	**5.3000e-004**	**5.0000e-005**	**5.8000e-004**	**0.0000**	**2.0472**	**2.0472**	**9.0000e-005**	**0.0000**	**2.0492**

3.4 Building Construction - Exterior 2 - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.2100e-003	0.0212	0.0223	3.0000e-005		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	2.0595	2.0595	5.9000e-004	0.0000	2.0719
Total	**7.2100e-003**	**0.0212**	**0.0223**	**3.0000e-005**		**1.8300e-003**	**1.8300e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**2.0595**	**2.0595**	**5.9000e-004**	**0.0000**	**2.0719**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	1.1500e-003	1.1800e-003	0.0000	6.0000e-005	2.0000e-005	9.0000e-005	2.0000e-005	2.0000e-005	4.0000e-005	0.0000	0.1961	0.1961	0.0000	0.0000	0.1961
Worker	4.3000e-004	6.3000e-004	6.3600e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0082	1.0082	5.0000e-005	0.0000	1.0093
Total	**5.4000e-004**	**1.7800e-003**	**7.5400e-003**	**1.0000e-005**	**1.1600e-003**	**3.0000e-005**	**1.2000e-003**	**3.1000e-004**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.2043**	**1.2043**	**5.0000e-005**	**0.0000**	**1.2054**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.2100e-003	0.0212	0.0223	3.0000e-005		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	2.0595	2.0595	5.9000e-004	0.0000	2.0719
Total	**7.2100e-003**	**0.0212**	**0.0223**	**3.0000e-005**		**1.8300e-003**	**1.8300e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**2.0595**	**2.0595**	**5.9000e-004**	**0.0000**	**2.0719**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	1.1500e-003	1.1800e-003	0.0000	6.0000e-005	2.0000e-005	9.0000e-005	2.0000e-005	2.0000e-005	4.0000e-005	0.0000	0.1961	0.1961	0.0000	0.0000	0.1961
Worker	4.3000e-004	6.3000e-004	6.3600e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0082	1.0082	5.0000e-005	0.0000	1.0093
Total	**5.4000e-004**	**1.7800e-003**	**7.5400e-003**	**1.0000e-005**	**1.1600e-003**	**3.0000e-005**	**1.2000e-003**	**3.1000e-004**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.2043**	**1.2043**	**5.0000e-005**	**0.0000**	**1.2054**

3.5 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5900e-003	0.0362	0.0185	2.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	2.2571	2.2571	6.7000e-004	0.0000	2.2711
Total	**3.5900e-003**	**0.0362**	**0.0185**	**2.0000e-005**	**0.0000**	**2.2300e-003**	**2.2300e-003**	**0.0000**	**2.0500e-003**	**2.0500e-003**	**0.0000**	**2.2571**	**2.2571**	**6.7000e-004**	**0.0000**	**2.2711**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1260	0.1260	1.0000e-005	0.0000	0.1262
Total	**5.0000e-005**	**8.0000e-005**	**8.0000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1260**	**0.1260**	**1.0000e-005**	**0.0000**	**0.1262**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5900e-003	0.0362	0.0185	2.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	2.2571	2.2571	6.7000e-004	0.0000	2.2711
Total	**3.5900e-003**	**0.0362**	**0.0185**	**2.0000e-005**	**0.0000**	**2.2300e-003**	**2.2300e-003**	**0.0000**	**2.0500e-003**	**2.0500e-003**	**0.0000**	**2.2571**	**2.2571**	**6.7000e-004**	**0.0000**	**2.2711**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1260	0.1260	1.0000e-005	0.0000	0.1262
Total	**5.0000e-005**	**8.0000e-005**	**8.0000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1260**	**0.1260**	**1.0000e-005**	**0.0000**	**0.1262**

3.6 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7200e-003	0.0387	0.0231	3.0000e-005		2.4100e-003	2.4100e-003		2.2200e-003	2.2200e-003	0.0000	3.1773	3.1773	9.2000e-004	0.0000	3.1966
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.7200e-003**	**0.0387**	**0.0231**	**3.0000e-005**		**2.4100e-003**	**2.4100e-003**		**2.2200e-003**	**2.2200e-003**	**0.0000**	**3.1773**	**3.1773**	**9.2000e-004**	**0.0000**	**3.1966**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	2.0700e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3277	0.3277	2.0000e-005	0.0000	0.3280
Total	**1.4000e-004**	**2.1000e-004**	**2.0700e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3277**	**0.3277**	**2.0000e-005**	**0.0000**	**0.3280**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7200e-003	0.0387	0.0231	3.0000e-005		2.4100e-003	2.4100e-003		2.2200e-003	2.2200e-003	0.0000	3.1773	3.1773	9.2000e-004	0.0000	3.1966
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.7200e-003**	**0.0387**	**0.0231**	**3.0000e-005**		**2.4100e-003**	**2.4100e-003**		**2.2200e-003**	**2.2200e-003**	**0.0000**	**3.1773**	**3.1773**	**9.2000e-004**	**0.0000**	**3.1966**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.1000e-004	2.0700e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3277	0.3277	2.0000e-005	0.0000	0.3280
Total	**1.4000e-004**	**2.1000e-004**	**2.0700e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3277**	**0.3277**	**2.0000e-005**	**0.0000**	**0.3280**

RCH Expansion Project Parking Structure (Building O)

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	1,060.00	Space	2.50	385,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Building O, Parking Structure, 1,060 spaces, 385,500 SF

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	192,750.00	154,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	578,250.00	154,000.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_Nonresidential_Interior	578250	377250

tblConstructionPhase	NumDays	220.00	10.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	220.00	64.00
tblConstructionPhase	NumDays	220.00	45.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	6.00	5.00
tblConstructionPhase	PhaseEndDate	1/17/2014	11/22/2013
tblConstructionPhase	PhaseEndDate	4/2/2014	1/3/2014
tblConstructionPhase	PhaseEndDate	1/3/2014	1/17/2014
tblConstructionPhase	PhaseStartDate	1/4/2014	11/11/2013
tblConstructionPhase	PhaseStartDate	1/25/2014	1/27/2014
tblConstructionPhase	PhaseStartDate	2/1/2014	2/3/2014
tblConstructionPhase	PhaseStartDate	1/30/2014	11/4/2013
tblConstructionPhase	PhaseStartDate	11/23/2013	12/9/2013
tblConstructionPhase	PhaseStartDate	1/18/2014	1/20/2014
tblGrading	AcresOfGrading	5.00	1.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LandUseSquareFeet	424,000.00	385,500.00
tblLandUse	LotAcreage	9.54	2.50

tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Pressure Washers
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblTripsAndVMT	VendorTripNumber	63.00	2.00
tblTripsAndVMT	VendorTripNumber	63.00	2.00
tblTripsAndVMT	VendorTripNumber	63.00	0.00
tblTripsAndVMT	WorkerTripNumber	162.00	30.00
tblTripsAndVMT	WorkerTripNumber	162.00	8.00
tblTripsAndVMT	WorkerTripNumber	162.00	20.00
tblTripsAndVMT	WorkerTripNumber	32.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	51.7205	33.9237	30.0348	0.0436	0.6735	2.3659	3.0394	0.1791	2.3121	2.4912	0.0000	3,980.4339	3,980.4339	0.9278	0.0000	3,999.9177
2014	51.3538	40.6373	25.3825	0.0393	0.6159	1.8349	2.4508	0.1436	1.7160	1.8463	0.0000	3,959.0980	3,959.0980	1.0644	0.0000	3,981.4504

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	51.7205	33.9237	30.0348	0.0436	0.6735	2.3659	3.0394	0.1791	2.3121	2.4912	0.0000	3,980.4339	3,980.4339	0.9278	0.0000	3,999.9177
2014	51.3538	40.6373	25.3825	0.0393	0.5393	1.8349	2.3214	0.1436	1.7160	1.8323	0.0000	3,959.0980	3,959.0980	1.0644	0.0000	3,981.4504

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.94**	**0.00**	**2.36**	**0.00**	**0.00**	**0.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/1/2013	1/29/2014	5	64	
2	Construction - Concrete 1 45 days	Building Construction	11/4/2013	1/3/2014	5	45	
3	Construction - Concrete 2 10 days	Building Construction	11/11/2013	11/22/2013	5	10	
4	Architectural Coating	Architectural Coating	12/9/2013	1/17/2014	5	30	
5	Grading - Site Work	Grading	1/20/2014	1/24/2014	5	5	
6	Paving	Paving	1/27/2014	1/31/2014	5	5	
7	Site Prep - Site Work	Site Preparation	2/3/2014	2/5/2014	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 154,000; Non-Residential Outdoor: 154,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Aerial Lifts	2	8.00	62	0.31
Building Construction	Cement and Mortar Mixers	1	2.00	9	0.56
Construction - Concrete 2 10 days	Pumps	1	7.00	84	0.74
Construction - Concrete 2 10 days	Welders	5	7.00	46	0.45
Construction - Concrete 1 45 days	Aerial Lifts	2	8.00	62	0.31
Construction - Concrete 1 45 days	Cement and Mortar Mixers	1	8.00	9	0.56
Construction - Concrete 2 10 days	Pressure Washers	2	8.00	13	0.30
Architectural Coating	Aerial Lifts	1	8.00	62	0.31
Architectural Coating	Air Compressors	2	7.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29

Building Construction	Welders	2	8.00	46	0.45
Site Prep - Site Work	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Plate Compactors	2	8.00	8	0.43
Grading - Site Work	Rubber Tired Loaders	1	8.00	199	0.36
Grading - Site Work	Scrapers	1	8.00	361	0.48
Site Prep - Site Work	Plate Compactors	1	8.00	8	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Construction - Concrete 1 45 days	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction - Concrete 2 10 days	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	30.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Site Work	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep - Site Work	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4044	15.0413	9.4710	0.0135		0.8973	0.8973		0.8561	0.8561		1,305.9650	1,305.9650	0.3976		1,314.3146

Total	**2.4044**	**15.0413**	**9.4710**	**0.0135**		**0.8973**	**0.8973**		**0.8561**	**0.8561**		**1,305.9650**	**1,305.9650**	**0.3976**		**1,314.3146**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0264	0.2551	0.2567	4.2000e-004	0.0126	7.7200e-003	0.0203	3.5900e-003	7.0900e-003	0.0107		43.2130	43.2130	4.7000e-004		43.2229
Worker	0.1549	0.2058	2.0740	3.7000e-003	0.3353	2.5800e-003	0.3379	0.0889	2.3500e-003	0.0913		338.4783	338.4783	0.0193		338.8841
Total	**0.1813**	**0.4609**	**2.3307**	**4.1200e-003**	**0.3479**	**0.0103**	**0.3582**	**0.0925**	**9.4400e-003**	**0.1020**		**381.6913**	**381.6913**	**0.0198**		**382.1070**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4044	15.0413	9.4710	0.0135		0.8973	0.8973		0.8561	0.8561	0.0000	1,305.9650	1,305.9650	0.3976		1,314.3146
Total	**2.4044**	**15.0413**	**9.4710**	**0.0135**		**0.8973**	**0.8973**		**0.8561**	**0.8561**	**0.0000**	**1,305.9650**	**1,305.9650**	**0.3976**		**1,314.3146**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0264	0.2551	0.2567	4.2000e-004	0.0126	7.7200e-003	0.0203	3.5900e-003	7.0900e-003	0.0107		43.2130	43.2130	4.7000e-004		43.2229
Worker	0.1549	0.2058	2.0740	3.7000e-003	0.3353	2.5800e-003	0.3379	0.0889	2.3500e-003	0.0913		338.4783	338.4783	0.0193		338.8841

Total	**0.1813**	**0.4609**	**2.3307**	**4.1200e-003**	**0.3479**	**0.0103**	**0.3582**	**0.0925**	**9.4400e-003**	**0.1020**		**381.6913**	**381.6913**	**0.0198**		**382.1070**

3.2 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2076	14.2057	9.2150	0.0135		0.8227	0.8227		0.7848	0.7848		1,301.4959	1,301.4959	0.3844		1,309.5692
Total	**2.2076**	**14.2057**	**9.2150**	**0.0135**		**0.8227**	**0.8227**		**0.7848**	**0.7848**		**1,301.4959**	**1,301.4959**	**0.3844**		**1,309.5692**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.2265	0.2300	4.2000e-004	0.0126	5.0100e-003	0.0176	3.5900e-003	4.6100e-003	8.2000e-003		43.0101	43.0101	3.7000e-004		43.0179
Worker	0.1374	0.1823	1.8403	3.6900e-003	0.3353	2.3500e-003	0.3377	0.0889	2.1500e-003	0.0911		328.9264	328.9264	0.0175		329.2928
Total	**0.1591**	**0.4089**	**2.0703**	**4.1100e-003**	**0.3479**	**7.3600e-003**	**0.3553**	**0.0925**	**6.7600e-003**	**0.0993**		**371.9365**	**371.9365**	**0.0178**		**372.3106**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2076	14.2057	9.2150	0.0135		0.8227	0.8227		0.7848	0.7848	0.0000	1,301.4959	1,301.4959	0.3844		1,309.5692
Total	**2.2076**	**14.2057**	**9.2150**	**0.0135**		**0.8227**	**0.8227**		**0.7848**	**0.7848**	**0.0000**	**1,301.4959**	**1,301.4959**	**0.3844**		**1,309.5692**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.2265	0.2300	4.2000e-004	0.0126	5.0100e-003	0.0176	3.5900e-003	4.6100e-003	8.2000e-003		43.0101	43.0101	3.7000e-004		43.0179
Worker	0.1374	0.1823	1.8403	3.6900e-003	0.3353	2.3500e-003	0.3377	0.0889	2.1500e-003	0.0911		328.9264	328.9264	0.0175		329.2928
Total	**0.1591**	**0.4089**	**2.0703**	**4.1100e-003**	**0.3479**	**7.3600e-003**	**0.3553**	**0.0925**	**6.7600e-003**	**0.0993**		**371.9365**	**371.9365**	**0.0178**		**372.3106**

3.3 Construction - Concrete 1 45 days - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	3.0390	2.5123	4.0200e-003		0.1537	0.1537		0.1428	0.1428		402.6012	402.6012	0.1089		404.8871
Total	**0.2239**	**3.0390**	**2.5123**	**4.0200e-003**		**0.1537**	**0.1537**		**0.1428**	**0.1428**		**402.6012**	**402.6012**	**0.1089**		**404.8871**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0264	0.2551	0.2567	4.2000e-004	0.0126	7.7200e-003	0.0203	3.5900e-003	7.0900e-003	0.0107		43.2130	43.2130	4.7000e-004		43.2229
Worker	0.0413	0.0549	0.5531	9.9000e-004	0.0894	6.9000e-004	0.0901	0.0237	6.3000e-004	0.0243		90.2609	90.2609	5.1500e-003		90.3691
Total	**0.0677**	**0.3100**	**0.8097**	**1.4100e-003**	**0.1020**	**8.4100e-003**	**0.1104**	**0.0273**	**7.7200e-003**	**0.0350**		**133.4739**	**133.4739**	**5.6200e-003**		**133.5920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	3.0390	2.5123	4.0200e-003		0.1537	0.1537		0.1428	0.1428	0.0000	402.6012	402.6012	0.1089		404.8871
Total	**0.2239**	**3.0390**	**2.5123**	**4.0200e-003**		**0.1537**	**0.1537**		**0.1428**	**0.1428**	**0.0000**	**402.6012**	**402.6012**	**0.1089**		**404.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0264	0.2551	0.2567	4.2000e-004	0.0126	7.7200e-003	0.0203	3.5900e-003	7.0900e-003	0.0107		43.2130	43.2130	4.7000e-004		43.2229
Worker	0.0413	0.0549	0.5531	9.9000e-004	0.0894	6.9000e-004	0.0901	0.0237	6.3000e-004	0.0243		90.2609	90.2609	5.1500e-003		90.3691
Total	**0.0677**	**0.3100**	**0.8097**	**1.4100e-003**	**0.1020**	**8.4100e-003**	**0.1104**	**0.0273**	**7.7200e-003**	**0.0350**		**133.4739**	**133.4739**	**5.6200e-003**		**133.5920**

3.3 Construction - Concrete 1 45 days - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1964	2.6592	2.4911	4.0200e-003		0.1248	0.1248		0.1160	0.1160		400.8230	400.8230	0.1089		403.1089
Total	**0.1964**	**2.6592**	**2.4911**	**4.0200e-003**		**0.1248**	**0.1248**		**0.1160**	**0.1160**		**400.8230**	**400.8230**	**0.1089**		**403.1089**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.2265	0.2300	4.2000e-004	0.0126	5.0100e-003	0.0176	3.5900e-003	4.6100e-003	8.2000e-003		43.0101	43.0101	3.7000e-004		43.0179
Worker	0.0367	0.0486	0.4908	9.8000e-004	0.0894	6.3000e-004	0.0901	0.0237	5.7000e-004	0.0243		87.7137	87.7137	4.6500e-003		87.8114
Total	**0.0583**	**0.2752**	**0.7207**	**1.4000e-003**	**0.1020**	**5.6400e-003**	**0.1076**	**0.0273**	**5.1800e-003**	**0.0325**		**130.7238**	**130.7238**	**5.0200e-003**		**130.8293**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1964	2.6592	2.4911	4.0200e-003		0.1248	0.1248		0.1160	0.1160	0.0000	400.8230	400.8230	0.1089		403.1089
Total	**0.1964**	**2.6592**	**2.4911**	**4.0200e-003**		**0.1248**	**0.1248**		**0.1160**	**0.1160**	**0.0000**	**400.8230**	**400.8230**	**0.1089**		**403.1089**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.2265	0.2300	4.2000e-004	0.0126	5.0100e-003	0.0176	3.5900e-003	4.6100e-003	8.2000e-003		43.0101	43.0101	3.7000e-004		43.0179
Worker	0.0367	0.0486	0.4908	9.8000e-004	0.0894	6.3000e-004	0.0901	0.0237	5.7000e-004	0.0243		87.7137	87.7137	4.6500e-003		87.8114
Total	**0.0583**	**0.2752**	**0.7207**	**1.4000e-003**	**0.1020**	**5.6400e-003**	**0.1076**	**0.0273**	**5.1800e-003**	**0.0325**		**130.7238**	**130.7238**	**5.0200e-003**		**130.8293**

3.4 Construction - Concrete 2 10 days - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2585	14.9354	13.5285	0.0180		1.2945	1.2945		1.2945	1.2945		1,531.0503	1,531.0503	0.3831		1,539.0943
Total	**4.2585**	**14.9354**	**13.5285**	**0.0180**		**1.2945**	**1.2945**		**1.2945**	**1.2945**		**1,531.0503**	**1,531.0503**	**0.3831**		**1,539.0943**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1033	0.1372	1.3827	2.4600e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		225.6522	225.6522	0.0129		225.9227
Total	**0.1033**	**0.1372**	**1.3827**	**2.4600e-003**	**0.2236**	**1.7200e-003**	**0.2253**	**0.0593**	**1.5600e-003**	**0.0609**		**225.6522**	**225.6522**	**0.0129**		**225.9227**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2585	14.9354	13.5285	0.0180		1.2945	1.2945		1.2945	1.2945	0.0000	1,531.0503	1,531.0503	0.3831		1,539.0943
Total	**4.2585**	**14.9354**	**13.5285**	**0.0180**		**1.2945**	**1.2945**		**1.2945**	**1.2945**	**0.0000**	**1,531.0503**	**1,531.0503**	**0.3831**		**1,539.0943**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1033	0.1372	1.3827	2.4600e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		225.6522	225.6522	0.0129		225.9227
Total	**0.1033**	**0.1372**	**1.3827**	**2.4600e-003**	**0.2236**	**1.7200e-003**	**0.2253**	**0.0593**	**1.5600e-003**	**0.0609**		**225.6522**	**225.6522**	**0.0129**		**225.9227**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	47.5860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.2158	8.2399	5.6330	8.5900e-003		0.6959	0.6959		0.6904	0.6904		832.7546	832.7546	0.1535		835.9770
Total	**48.8018**	**8.2399**	**5.6330**	**8.5900e-003**		**0.6959**	**0.6959**		**0.6904**	**0.6904**		**832.7546**	**832.7546**	**0.1535**		**835.9770**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0413	0.0549	0.5531	9.9000e-004	0.0894	6.9000e-004	0.0901	0.0237	6.3000e-004	0.0243		90.2609	90.2609	5.1500e-003		90.3691
Total	**0.0413**	**0.0549**	**0.5531**	**9.9000e-004**	**0.0894**	**6.9000e-004**	**0.0901**	**0.0237**	**6.3000e-004**	**0.0243**		**90.2609**	**90.2609**	**5.1500e-003**		**90.3691**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	47.5860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.2158	8.2399	5.6330	8.5900e-003		0.6959	0.6959		0.6904	0.6904	0.0000	832.7546	832.7546	0.1535		835.9770
Total	**48.8018**	**8.2399**	**5.6330**	**8.5900e-003**		**0.6959**	**0.6959**		**0.6904**	**0.6904**	**0.0000**	**832.7546**	**832.7546**	**0.1535**		**835.9770**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0413	0.0549	0.5531	9.9000e-004	0.0894	6.9000e-004	0.0901	0.0237	6.3000e-004	0.0243		90.2609	90.2609	5.1500e-003		90.3691
Total	**0.0413**	**0.0549**	**0.5531**	**9.9000e-004**	**0.0894**	**6.9000e-004**	**0.0901**	**0.0237**	**6.3000e-004**	**0.0243**		**90.2609**	**90.2609**	**5.1500e-003**		**90.3691**

3.5 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	47.5860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.1098	7.6238	5.5750	8.5900e-003		0.6265	0.6265		0.6222	0.6222		831.8655	831.8655	0.1454		834.9180
Total	**48.6958**	**7.6238**	**5.5750**	**8.5900e-003**		**0.6265**	**0.6265**		**0.6222**	**0.6222**		**831.8655**	**831.8655**	**0.1454**		**834.9180**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0367	0.0486	0.4908	9.8000e-004	0.0894	6.3000e-004	0.0901	0.0237	5.7000e-004	0.0243		87.7137	87.7137	4.6500e-003		87.8114
Total	**0.0367**	**0.0486**	**0.4908**	**9.8000e-004**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.7000e-004**	**0.0243**		**87.7137**	**87.7137**	**4.6500e-003**		**87.8114**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	47.5860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.1098	7.6238	5.5750	8.5900e-003		0.6265	0.6265		0.6222	0.6222	0.0000	831.8655	831.8655	0.1454		834.9180
Total	**48.6958**	**7.6238**	**5.5750**	**8.5900e-003**		**0.6265**	**0.6265**		**0.6222**	**0.6222**	**0.0000**	**831.8655**	**831.8655**	**0.1454**		**834.9180**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0367	0.0486	0.4908	9.8000e-004	0.0894	6.3000e-004	0.0901	0.0237	5.7000e-004	0.0243		87.7137	87.7137	4.6500e-003		87.8114
Total	**0.0367**	**0.0486**	**0.4908**	**9.8000e-004**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.7000e-004**	**0.0243**		**87.7137**	**87.7137**	**4.6500e-003**		**87.8114**

3.6 Grading - Site Work - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2121	0.0000	0.2121	0.0229	0.0000	0.0229			0.0000			0.0000
Off-Road	1.9768	25.9924	13.7905	0.0210		1.0044	1.0044		0.9241	0.9241		2,230.8445	2,230.8445	0.6592		2,244.6885
Total	**1.9768**	**25.9924**	**13.7905**	**0.0210**	**0.2121**	**1.0044**	**1.2165**	**0.0229**	**0.9241**	**0.9470**		**2,230.8445**	**2,230.8445**	**0.6592**		**2,244.6885**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0229	0.0304	0.3067	6.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		54.8211	54.8211	2.9100e-003		54.8821
Total	**0.0229**	**0.0304**	**0.3067**	**6.2000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**54.8211**	**54.8211**	**2.9100e-003**		**54.8821**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0827	0.0000	0.0827	8.9300e-003	0.0000	8.9300e-003			0.0000			0.0000
Off-Road	1.9768	25.9924	13.7905	0.0210		1.0044	1.0044		0.9241	0.9241	0.0000	2,230.8445	2,230.8445	0.6592		2,244.6885
Total	**1.9768**	**25.9924**	**13.7905**	**0.0210**	**0.0827**	**1.0044**	**1.0871**	**8.9300e-003**	**0.9241**	**0.9330**	**0.0000**	**2,230.8445**	**2,230.8445**	**0.6592**		**2,244.6885**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0229	0.0304	0.3067	6.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		54.8211	54.8211	2.9100e-003		54.8821
Total	**0.0229**	**0.0304**	**0.3067**	**6.2000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**54.8211**	**54.8211**	**2.9100e-003**		**54.8821**

3.7 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7955	8.2340	5.0195	7.6000e-003		0.4801	0.4801		0.4432	0.4432		772.2284	772.2284	0.2150		776.7431
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7955**	**8.2340**	**5.0195**	**7.6000e-003**		**0.4801**	**0.4801**		**0.4432**	**0.4432**		**772.2284**	**772.2284**	**0.2150**		**776.7431**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0608	0.6134	1.2300e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		109.6421	109.6421	5.8200e-003		109.7643
Total	**0.0458**	**0.0608**	**0.6134**	**1.2300e-003**	**0.1118**	**7.8000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**109.6421**	**109.6421**	**5.8200e-003**		**109.7643**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7955	8.2340	5.0195	7.6000e-003		0.4801	0.4801		0.4432	0.4432	0.0000	772.2284	772.2284	0.2150		776.7431
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7955**	**8.2340**	**5.0195**	**7.6000e-003**		**0.4801**	**0.4801**		**0.4432**	**0.4432**	**0.0000**	**772.2284**	**772.2284**	**0.2150**		**776.7431**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0458	0.0608	0.6134	1.2300e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		109.6421	109.6421	5.8200e-003		109.7643
Total	**0.0458**	**0.0608**	**0.6134**	**1.2300e-003**	**0.1118**	**7.8000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**109.6421**	**109.6421**	**5.8200e-003**		**109.7643**

3.8 Site Prep - Site Work - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1768	0.0000	0.1768	0.0191	0.0000	0.0191			0.0000			0.0000
Off-Road	0.4724	3.8516	2.3242	3.0200e-003		0.3267	0.3267		0.3013	0.3013		303.9058	303.9058	0.0832		305.6530
Total	**0.4724**	**3.8516**	**2.3242**	**3.0200e-003**	**0.1768**	**0.3267**	**0.5034**	**0.0191**	**0.3013**	**0.3204**		**303.9058**	**303.9058**	**0.0832**		**305.6530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0229	0.0304	0.3067	6.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		54.8211	54.8211	2.9100e-003		54.8821
Total	**0.0229**	**0.0304**	**0.3067**	**6.2000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**54.8211**	**54.8211**	**2.9100e-003**		**54.8821**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0689	0.0000	0.0689	7.4400e-003	0.0000	7.4400e-003			0.0000			0.0000
Off-Road	0.4724	3.8516	2.3242	3.0200e-003		0.3267	0.3267		0.3013	0.3013	0.0000	303.9058	303.9058	0.0832		305.6530
Total	**0.4724**	**3.8516**	**2.3242**	**3.0200e-003**	**0.0689**	**0.3267**	**0.3956**	**7.4400e-003**	**0.3013**	**0.3088**	**0.0000**	**303.9058**	**303.9058**	**0.0832**		**305.6530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0229	0.0304	0.3067	6.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		54.8211	54.8211	2.9100e-003		54.8821
Total	**0.0229**	**0.0304**	**0.3067**	**6.2000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**54.8211**	**54.8211**	**2.9100e-003**		**54.8821**

RCH Expansion Project Parking Structure

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	1,060.00	Space	2.50	385,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Building O, Parking Structure, 1,060 spaces, 385,500 SF

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	192,750.00	154,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	578,250.00	154,000.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_Nonresidential_Interior	578250	377250

tblConstructionPhase	NumDays	220.00	10.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	220.00	64.00
tblConstructionPhase	NumDays	220.00	45.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	6.00	5.00
tblConstructionPhase	PhaseEndDate	1/17/2014	11/22/2013
tblConstructionPhase	PhaseEndDate	4/2/2014	1/3/2014
tblConstructionPhase	PhaseEndDate	1/3/2014	1/17/2014
tblConstructionPhase	PhaseStartDate	1/4/2014	11/11/2013
tblConstructionPhase	PhaseStartDate	1/25/2014	1/27/2014
tblConstructionPhase	PhaseStartDate	2/1/2014	2/3/2014
tblConstructionPhase	PhaseStartDate	1/30/2014	11/4/2013
tblConstructionPhase	PhaseStartDate	11/23/2013	12/9/2013
tblConstructionPhase	PhaseStartDate	1/18/2014	1/20/2014
tblGrading	AcresOfGrading	5.00	1.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LandUseSquareFeet	424,000.00	385,500.00
tblLandUse	LotAcreage	9.54	2.50

tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Pressure Washers
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblTripsAndVMT	VendorTripNumber	63.00	2.00
tblTripsAndVMT	VendorTripNumber	63.00	2.00
tblTripsAndVMT	VendorTripNumber	63.00	0.00
tblTripsAndVMT	WorkerTripNumber	162.00	30.00
tblTripsAndVMT	WorkerTripNumber	162.00	8.00
tblTripsAndVMT	WorkerTripNumber	162.00	20.00
tblTripsAndVMT	WorkerTripNumber	32.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	51.7271	33.8846	30.5974	0.0443	0.6735	2.3658	3.0392	0.1791	2.3119	2.4910	0.0000	4,042.6116	4,042.6116	0.9278	0.0000	4,062.0949
2014	51.3604	40.6180	25.6909	0.0397	0.6159	1.8348	2.4507	0.1436	1.7160	1.8462	0.0000	3,995.5614	3,995.5614	1.0644	0.0000	4,017.9137

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	51.7271	33.8846	30.5974	0.0443	0.6735	2.3658	3.0392	0.1791	2.3119	2.4910	0.0000	4,042.6116	4,042.6116	0.9278	0.0000	4,062.0949
2014	51.3604	40.6180	25.6909	0.0397	0.5393	1.8348	2.3213	0.1436	1.7160	1.8322	0.0000	3,995.5614	3,995.5614	1.0644	0.0000	4,017.9136

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.94**	**0.00**	**2.36**	**0.00**	**0.00**	**0.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/1/2013	1/29/2014	5	64	
2	Construction - Concrete 1 45 days	Building Construction	11/4/2013	1/3/2014	5	45	
3	Construction - Concrete 2 10 days	Building Construction	11/11/2013	11/22/2013	5	10	
4	Architectural Coating	Architectural Coating	12/9/2013	1/17/2014	5	30	
5	Grading - Site Work	Grading	1/20/2014	1/24/2014	5	5	
6	Paving	Paving	1/27/2014	1/31/2014	5	5	
7	Site Prep - Site Work	Site Preparation	2/3/2014	2/5/2014	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 154,000; Non-Residential Outdoor: 154,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Aerial Lifts	2	8.00	62	0.31
Building Construction	Cement and Mortar Mixers	1	2.00	9	0.56
Construction - Concrete 2 10 days	Pumps	1	7.00	84	0.74
Construction - Concrete 2 10 days	Welders	5	7.00	46	0.45
Construction - Concrete 1 45 days	Aerial Lifts	2	8.00	62	0.31
Construction - Concrete 1 45 days	Cement and Mortar Mixers	1	8.00	9	0.56
Construction - Concrete 2 10 days	Pressure Washers	2	8.00	13	0.30
Architectural Coating	Aerial Lifts	1	8.00	62	0.31
Architectural Coating	Air Compressors	2	7.00	78	0.48

Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Welders	2	8.00	46	0.45
Site Prep - Site Work	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Plate Compactors	2	8.00	8	0.43
Grading - Site Work	Rubber Tired Loaders	1	8.00	199	0.36
Grading - Site Work	Scrapers	1	8.00	361	0.48
Site Prep - Site Work	Plate Compactors	1	8.00	8	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Construction - Concrete 1 45 days	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction - Concrete 2 10 days	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	30.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Site Work	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep - Site Work	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4044	15.0413	9.4710	0.0135		0.8973	0.8973		0.8561	0.8561		1,305.9650	1,305.9650	0.3976		1,314.3146
Total	**2.4044**	**15.0413**	**9.4710**	**0.0135**		**0.8973**	**0.8973**		**0.8561**	**0.8561**		**1,305.9650**	**1,305.9650**	**0.3976**		**1,314.3146**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0248	0.2481	0.2334	4.2000e-004	0.0126	7.6300e-003	0.0202	3.5900e-003	7.0200e-003	0.0106		43.5818	43.5818	4.6000e-004		43.5914
Worker	0.1613	0.1927	2.3891	4.0500e-003	0.3353	2.5800e-003	0.3379	0.0889	2.3500e-003	0.0913		370.2577	370.2577	0.0193		370.6635
Total	**0.1861**	**0.4409**	**2.6225**	**4.4700e-003**	**0.3479**	**0.0102**	**0.3581**	**0.0925**	**9.3700e-003**	**0.1019**		**413.8394**	**413.8394**	**0.0198**		**414.2549**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4044	15.0413	9.4710	0.0135		0.8973	0.8973		0.8561	0.8561	0.0000	1,305.9650	1,305.9650	0.3976		1,314.3146
Total	**2.4044**	**15.0413**	**9.4710**	**0.0135**		**0.8973**	**0.8973**		**0.8561**	**0.8561**	**0.0000**	**1,305.9650**	**1,305.9650**	**0.3976**		**1,314.3146**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0248	0.2481	0.2334	4.2000e-004	0.0126	7.6300e-003	0.0202	3.5900e-003	7.0200e-003	0.0106		43.5818	43.5818	4.6000e-004		43.5914
Worker	0.1613	0.1927	2.3891	4.0500e-003	0.3353	2.5800e-003	0.3379	0.0889	2.3500e-003	0.0913		370.2577	370.2577	0.0193		370.6635
Total	**0.1861**	**0.4409**	**2.6225**	**4.4700e-003**	**0.3479**	**0.0102**	**0.3581**	**0.0925**	**9.3700e-003**	**0.1019**		**413.8394**	**413.8394**	**0.0198**		**414.2549**

3.2 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2076	14.2057	9.2150	0.0135		0.8227	0.8227		0.7848	0.7848		1,301.4959	1,301.4959	0.3844		1,309.5692
Total	**2.2076**	**14.2057**	**9.2150**	**0.0135**		**0.8227**	**0.8227**		**0.7848**	**0.7848**		**1,301.4959**	**1,301.4959**	**0.3844**		**1,309.5692**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0204	0.2205	0.2067	4.2000e-004	0.0126	4.9500e-003	0.0175	3.5900e-003	4.5500e-003	8.1500e-003		43.3792	43.3792	3.6000e-004		43.3867
Worker	0.1434	0.1709	2.1246	4.0400e-003	0.3353	2.3500e-003	0.3377	0.0889	2.1500e-003	0.0911		359.8645	359.8645	0.0175		360.2308
Total	**0.1638**	**0.3914**	**2.3313**	**4.4600e-003**	**0.3479**	**7.3000e-003**	**0.3552**	**0.0925**	**6.7000e-003**	**0.0992**		**403.2436**	**403.2436**	**0.0178**		**403.6175**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2076	14.2057	9.2150	0.0135		0.8227	0.8227		0.7848	0.7848	0.0000	1,301.4959	1,301.4959	0.3844		1,309.5692
Total	**2.2076**	**14.2057**	**9.2150**	**0.0135**		**0.8227**	**0.8227**		**0.7848**	**0.7848**	**0.0000**	**1,301.4959**	**1,301.4959**	**0.3844**		**1,309.5692**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0204	0.2205	0.2067	4.2000e-004	0.0126	4.9500e-003	0.0175	3.5900e-003	4.5500e-003	8.1500e-003		43.3792	43.3792	3.6000e-004		43.3867
Worker	0.1434	0.1709	2.1246	4.0400e-003	0.3353	2.3500e-003	0.3377	0.0889	2.1500e-003	0.0911		359.8645	359.8645	0.0175		360.2308
Total	**0.1638**	**0.3914**	**2.3313**	**4.4600e-003**	**0.3479**	**7.3000e-003**	**0.3552**	**0.0925**	**6.7000e-003**	**0.0992**		**403.2436**	**403.2436**	**0.0178**		**403.6175**

3.3 Construction - Concrete 1 45 days - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	3.0390	2.5123	4.0200e-003		0.1537	0.1537		0.1428	0.1428		402.6012	402.6012	0.1089		404.8871
Total	**0.2239**	**3.0390**	**2.5123**	**4.0200e-003**		**0.1537**	**0.1537**		**0.1428**	**0.1428**		**402.6012**	**402.6012**	**0.1089**		**404.8871**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0248	0.2481	0.2334	4.2000e-004	0.0126	7.6300e-003	0.0202	3.5900e-003	7.0200e-003	0.0106		43.5818	43.5818	4.6000e-004		43.5914
Worker	0.0430	0.0514	0.6371	1.0800e-003	0.0894	6.9000e-004	0.0901	0.0237	6.3000e-004	0.0243		98.7354	98.7354	5.1500e-003		98.8436
Total	**0.0679**	**0.2995**	**0.8705**	**1.5000e-003**	**0.1020**	**8.3200e-003**	**0.1103**	**0.0273**	**7.6500e-003**	**0.0350**		**142.3171**	**142.3171**	**5.6100e-003**		**142.4350**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	3.0390	2.5123	4.0200e-003		0.1537	0.1537		0.1428	0.1428	0.0000	402.6012	402.6012	0.1089		404.8871
Total	**0.2239**	**3.0390**	**2.5123**	**4.0200e-003**		**0.1537**	**0.1537**		**0.1428**	**0.1428**	**0.0000**	**402.6012**	**402.6012**	**0.1089**		**404.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0248	0.2481	0.2334	4.2000e-004	0.0126	7.6300e-003	0.0202	3.5900e-003	7.0200e-003	0.0106		43.5818	43.5818	4.6000e-004		43.5914
Worker	0.0430	0.0514	0.6371	1.0800e-003	0.0894	6.9000e-004	0.0901	0.0237	6.3000e-004	0.0243		98.7354	98.7354	5.1500e-003		98.8436
Total	**0.0679**	**0.2995**	**0.8705**	**1.5000e-003**	**0.1020**	**8.3200e-003**	**0.1103**	**0.0273**	**7.6500e-003**	**0.0350**		**142.3171**	**142.3171**	**5.6100e-003**		**142.4350**

3.3 Construction - Concrete 1 45 days - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1964	2.6592	2.4911	4.0200e-003		0.1248	0.1248		0.1160	0.1160		400.8230	400.8230	0.1089		403.1089
Total	**0.1964**	**2.6592**	**2.4911**	**4.0200e-003**		**0.1248**	**0.1248**		**0.1160**	**0.1160**		**400.8230**	**400.8230**	**0.1089**		**403.1089**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0204	0.2205	0.2067	4.2000e-004	0.0126	4.9500e-003	0.0175	3.5900e-003	4.5500e-003	8.1500e-003		43.3792	43.3792	3.6000e-004		43.3867
Worker	0.0383	0.0456	0.5666	1.0800e-003	0.0894	6.3000e-004	0.0901	0.0237	5.7000e-004	0.0243		95.9639	95.9639	4.6500e-003		96.0616
Total	**0.0586**	**0.2661**	**0.7732**	**1.5000e-003**	**0.1020**	**5.5800e-003**	**0.1076**	**0.0273**	**5.1200e-003**	**0.0324**		**139.3430**	**139.3430**	**5.0100e-003**		**139.4483**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1964	2.6592	2.4911	4.0200e-003		0.1248	0.1248		0.1160	0.1160	0.0000	400.8230	400.8230	0.1089		403.1089
Total	**0.1964**	**2.6592**	**2.4911**	**4.0200e-003**		**0.1248**	**0.1248**		**0.1160**	**0.1160**	**0.0000**	**400.8230**	**400.8230**	**0.1089**		**403.1089**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0204	0.2205	0.2067	4.2000e-004	0.0126	4.9500e-003	0.0175	3.5900e-003	4.5500e-003	8.1500e-003		43.3792	43.3792	3.6000e-004		43.3867
Worker	0.0383	0.0456	0.5666	1.0800e-003	0.0894	6.3000e-004	0.0901	0.0237	5.7000e-004	0.0243		95.9639	95.9639	4.6500e-003		96.0616
Total	**0.0586**	**0.2661**	**0.7732**	**1.5000e-003**	**0.1020**	**5.5800e-003**	**0.1076**	**0.0273**	**5.1200e-003**	**0.0324**		**139.3430**	**139.3430**	**5.0100e-003**		**139.4483**

3.4 Construction - Concrete 2 10 days - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2585	14.9354	13.5285	0.0180		1.2945	1.2945		1.2945	1.2945		1,531.0503	1,531.0503	0.3831		1,539.0943
Total	**4.2585**	**14.9354**	**13.5285**	**0.0180**		**1.2945**	**1.2945**		**1.2945**	**1.2945**		**1,531.0503**	**1,531.0503**	**0.3831**		**1,539.0943**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1075	0.1285	1.5927	2.7000e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		246.8385	246.8385	0.0129		247.1090
Total	**0.1075**	**0.1285**	**1.5927**	**2.7000e-003**	**0.2236**	**1.7200e-003**	**0.2253**	**0.0593**	**1.5600e-003**	**0.0609**		**246.8385**	**246.8385**	**0.0129**		**247.1090**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2585	14.9354	13.5285	0.0180		1.2945	1.2945		1.2945	1.2945	0.0000	1,531.0503	1,531.0503	0.3831		1,539.0943
Total	**4.2585**	**14.9354**	**13.5285**	**0.0180**		**1.2945**	**1.2945**		**1.2945**	**1.2945**	**0.0000**	**1,531.0503**	**1,531.0503**	**0.3831**		**1,539.0943**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1075	0.1285	1.5927	2.7000e-003	0.2236	1.7200e-003	0.2253	0.0593	1.5600e-003	0.0609		246.8385	246.8385	0.0129		247.1090
Total	**0.1075**	**0.1285**	**1.5927**	**2.7000e-003**	**0.2236**	**1.7200e-003**	**0.2253**	**0.0593**	**1.5600e-003**	**0.0609**		**246.8385**	**246.8385**	**0.0129**		**247.1090**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	47.5860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.2158	8.2399	5.6330	8.5900e-003		0.6959	0.6959		0.6904	0.6904		832.7546	832.7546	0.1535		835.9770
Total	**48.8018**	**8.2399**	**5.6330**	**8.5900e-003**		**0.6959**	**0.6959**		**0.6904**	**0.6904**		**832.7546**	**832.7546**	**0.1535**		**835.9770**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0430	0.0514	0.6371	1.0800e-003	0.0894	6.9000e-004	0.0901	0.0237	6.3000e-004	0.0243		98.7354	98.7354	5.1500e-003		98.8436
Total	**0.0430**	**0.0514**	**0.6371**	**1.0800e-003**	**0.0894**	**6.9000e-004**	**0.0901**	**0.0237**	**6.3000e-004**	**0.0243**		**98.7354**	**98.7354**	**5.1500e-003**		**98.8436**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	47.5860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.2158	8.2399	5.6330	8.5900e-003		0.6959	0.6959		0.6904	0.6904	0.0000	832.7546	832.7546	0.1535		835.9770
Total	**48.8018**	**8.2399**	**5.6330**	**8.5900e-003**		**0.6959**	**0.6959**		**0.6904**	**0.6904**	**0.0000**	**832.7546**	**832.7546**	**0.1535**		**835.9770**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0430	0.0514	0.6371	1.0800e-003	0.0894	6.9000e-004	0.0901	0.0237	6.3000e-004	0.0243		98.7354	98.7354	5.1500e-003		98.8436
Total	**0.0430**	**0.0514**	**0.6371**	**1.0800e-003**	**0.0894**	**6.9000e-004**	**0.0901**	**0.0237**	**6.3000e-004**	**0.0243**		**98.7354**	**98.7354**	**5.1500e-003**		**98.8436**

3.5 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	47.5860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.1098	7.6238	5.5750	8.5900e-003		0.6265	0.6265		0.6222	0.6222		831.8655	831.8655	0.1454		834.9180
Total	**48.6958**	**7.6238**	**5.5750**	**8.5900e-003**		**0.6265**	**0.6265**		**0.6222**	**0.6222**		**831.8655**	**831.8655**	**0.1454**		**834.9180**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0383	0.0456	0.5666	1.0800e-003	0.0894	6.3000e-004	0.0901	0.0237	5.7000e-004	0.0243		95.9639	95.9639	4.6500e-003		96.0616
Total	**0.0383**	**0.0456**	**0.5666**	**1.0800e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.7000e-004**	**0.0243**		**95.9639**	**95.9639**	**4.6500e-003**		**96.0616**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	47.5860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.1098	7.6238	5.5750	8.5900e-003		0.6265	0.6265		0.6222	0.6222	0.0000	831.8655	831.8655	0.1454		834.9180
Total	**48.6958**	**7.6238**	**5.5750**	**8.5900e-003**		**0.6265**	**0.6265**		**0.6222**	**0.6222**	**0.0000**	**831.8655**	**831.8655**	**0.1454**		**834.9180**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0383	0.0456	0.5666	1.0800e-003	0.0894	6.3000e-004	0.0901	0.0237	5.7000e-004	0.0243		95.9639	95.9639	4.6500e-003		96.0616
Total	**0.0383**	**0.0456**	**0.5666**	**1.0800e-003**	**0.0894**	**6.3000e-004**	**0.0901**	**0.0237**	**5.7000e-004**	**0.0243**		**95.9639**	**95.9639**	**4.6500e-003**		**96.0616**

3.6 Grading - Site Work - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2121	0.0000	0.2121	0.0229	0.0000	0.0229			0.0000			0.0000
Off-Road	1.9768	25.9924	13.7905	0.0210		1.0044	1.0044		0.9241	0.9241		2,230.8445	2,230.8445	0.6592		2,244.6885
Total	**1.9768**	**25.9924**	**13.7905**	**0.0210**	**0.2121**	**1.0044**	**1.2165**	**0.0229**	**0.9241**	**0.9470**		**2,230.8445**	**2,230.8445**	**0.6592**		**2,244.6885**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0285	0.3541	6.7000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		59.9774	59.9774	2.9100e-003		60.0385
Total	**0.0239**	**0.0285**	**0.3541**	**6.7000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**59.9774**	**59.9774**	**2.9100e-003**		**60.0385**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0827	0.0000	0.0827	8.9300e-003	0.0000	8.9300e-003			0.0000			0.0000
Off-Road	1.9768	25.9924	13.7905	0.0210		1.0044	1.0044		0.9241	0.9241	0.0000	2,230.8445	2,230.8445	0.6592		2,244.6885
Total	**1.9768**	**25.9924**	**13.7905**	**0.0210**	**0.0827**	**1.0044**	**1.0871**	**8.9300e-003**	**0.9241**	**0.9330**	**0.0000**	**2,230.8445**	**2,230.8445**	**0.6592**		**2,244.6885**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0285	0.3541	6.7000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		59.9774	59.9774	2.9100e-003		60.0385
Total	**0.0239**	**0.0285**	**0.3541**	**6.7000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**59.9774**	**59.9774**	**2.9100e-003**		**60.0385**

3.7 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7955	8.2340	5.0195	7.6000e-003		0.4801	0.4801		0.4432	0.4432		772.2284	772.2284	0.2150		776.7431
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7955**	**8.2340**	**5.0195**	**7.6000e-003**		**0.4801**	**0.4801**		**0.4432**	**0.4432**		**772.2284**	**772.2284**	**0.2150**		**776.7431**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0478	0.0570	0.7082	1.3500e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		119.9548	119.9548	5.8200e-003		120.0769
Total	**0.0478**	**0.0570**	**0.7082**	**1.3500e-003**	**0.1118**	**7.8000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**119.9548**	**119.9548**	**5.8200e-003**		**120.0769**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7955	8.2340	5.0195	7.6000e-003		0.4801	0.4801		0.4432	0.4432	0.0000	772.2284	772.2284	0.2150		776.7431
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7955**	**8.2340**	**5.0195**	**7.6000e-003**		**0.4801**	**0.4801**		**0.4432**	**0.4432**	**0.0000**	**772.2284**	**772.2284**	**0.2150**		**776.7431**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0478	0.0570	0.7082	1.3500e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		119.9548	119.9548	5.8200e-003		120.0769
Total	**0.0478**	**0.0570**	**0.7082**	**1.3500e-003**	**0.1118**	**7.8000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**119.9548**	**119.9548**	**5.8200e-003**		**120.0769**

3.8 Site Prep - Site Work - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1768	0.0000	0.1768	0.0191	0.0000	0.0191			0.0000			0.0000
Off-Road	0.4724	3.8516	2.3242	3.0200e-003		0.3267	0.3267		0.3013	0.3013		303.9058	303.9058	0.0832		305.6530
Total	**0.4724**	**3.8516**	**2.3242**	**3.0200e-003**	**0.1768**	**0.3267**	**0.5034**	**0.0191**	**0.3013**	**0.3204**		**303.9058**	**303.9058**	**0.0832**		**305.6530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0285	0.3541	6.7000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		59.9774	59.9774	2.9100e-003		60.0385
Total	**0.0239**	**0.0285**	**0.3541**	**6.7000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**59.9774**	**59.9774**	**2.9100e-003**		**60.0385**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0689	0.0000	0.0689	7.4400e-003	0.0000	7.4400e-003			0.0000			0.0000
Off-Road	0.4724	3.8516	2.3242	3.0200e-003		0.3267	0.3267		0.3013	0.3013	0.0000	303.9058	303.9058	0.0832		305.6530
Total	**0.4724**	**3.8516**	**2.3242**	**3.0200e-003**	**0.0689**	**0.3267**	**0.3956**	**7.4400e-003**	**0.3013**	**0.3088**	**0.0000**	**303.9058**	**303.9058**	**0.0832**		**305.6530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0285	0.3541	6.7000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		59.9774	59.9774	2.9100e-003		60.0385
Total	**0.0239**	**0.0285**	**0.3541**	**6.7000e-004**	**0.0559**	**3.9000e-004**	**0.0563**	**0.0148**	**3.6000e-004**	**0.0152**		**59.9774**	**59.9774**	**2.9100e-003**		**60.0385**

RCH Expansion Project Parking Structure

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	1,060.00	Space	2.50	385,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2014
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Building O, Parking Structure, 1,060 spaces, 385,500 SF

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	192,750.00	154,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	578,250.00	154,000.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_Nonresidential_Interior	578250	377250

tblConstructionPhase	NumDays	220.00	10.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	220.00	64.00
tblConstructionPhase	NumDays	220.00	45.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	6.00	5.00
tblConstructionPhase	PhaseEndDate	1/17/2014	11/22/2013
tblConstructionPhase	PhaseEndDate	4/2/2014	1/3/2014
tblConstructionPhase	PhaseEndDate	1/3/2014	1/17/2014
tblConstructionPhase	PhaseStartDate	1/4/2014	11/11/2013
tblConstructionPhase	PhaseStartDate	1/25/2014	1/27/2014
tblConstructionPhase	PhaseStartDate	2/1/2014	2/3/2014
tblConstructionPhase	PhaseStartDate	1/30/2014	11/4/2013
tblConstructionPhase	PhaseStartDate	11/23/2013	12/9/2013
tblConstructionPhase	PhaseStartDate	1/18/2014	1/20/2014
tblGrading	AcresOfGrading	5.00	1.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LandUseSquareFeet	424,000.00	385,500.00
tblLandUse	LotAcreage	9.54	2.50
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Pressure Washers
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts

tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblTripsAndVMT	VendorTripNumber	63.00	2.00
tblTripsAndVMT	VendorTripNumber	63.00	2.00
tblTripsAndVMT	VendorTripNumber	63.00	0.00
tblTripsAndVMT	WorkerTripNumber	162.00	30.00
tblTripsAndVMT	WorkerTripNumber	162.00	8.00
tblTripsAndVMT	WorkerTripNumber	162.00	20.00
tblTripsAndVMT	WorkerTripNumber	32.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	0.4984	0.5500	0.4535	6.8000e-004	0.0113	0.0353	0.0466	3.0100e-003	0.0341	0.0371	0.0000	58.3598	58.3598	0.0133	0.0000	58.6400
2014	0.3497	0.2995	0.2171	3.4000e-004	5.6000e-003	0.0172	0.0228	1.3700e-003	0.0164	0.0178	0.0000	29.8177	29.8177	6.9900e-003	0.0000	29.9645
Total	**0.8481**	**0.8495**	**0.6705**	**1.0200e-003**	**0.0169**	**0.0525**	**0.0694**	**4.3800e-003**	**0.0505**	**0.0549**	**0.0000**	**88.1775**	**88.1775**	**0.0203**	**0.0000**	**88.6045**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	0.4984	0.5500	0.4535	6.8000e-004	0.0113	0.0353	0.0466	3.0100e-003	0.0341	0.0371	0.0000	58.3598	58.3598	0.0133	0.0000	58.6399
2014	0.3497	0.2995	0.2171	3.4000e-004	5.1200e-003	0.0172	0.0223	1.3100e-003	0.0164	0.0177	0.0000	29.8176	29.8176	6.9900e-003	0.0000	29.9645
Total	**0.8481**	**0.8495**	**0.6705**	**1.0200e-003**	**0.0164**	**0.0525**	**0.0689**	**4.3200e-003**	**0.0505**	**0.0549**	**0.0000**	**88.1774**	**88.1774**	**0.0203**	**0.0000**	**88.6044**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**2.84**	**0.00**	**0.71**	**1.37**	**0.00**	**0.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/1/2013	1/29/2014	5	64	
2	Construction - Concrete 1 45 days	Building Construction	11/4/2013	1/3/2014	5	45	
3	Construction - Concrete 2 10 days	Building Construction	11/11/2013	11/22/2013	5	10	
4	Architectural Coating	Architectural Coating	12/9/2013	1/17/2014	5	30	
5	Grading - Site Work	Grading	1/20/2014	1/24/2014	5	5	
6	Paving	Paving	1/27/2014	1/31/2014	5	5	
7	Site Prep - Site Work	Site Preparation	2/3/2014	2/5/2014	5	3	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 154,000; Non-Residential Outdoor: 154,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Aerial Lifts	2	8.00	62	0.31
Building Construction	Cement and Mortar Mixers	1	2.00	9	0.56
Construction - Concrete 2 10 days	Pumps	1	7.00	84	0.74
Construction - Concrete 2 10 days	Welders	5	7.00	46	0.45
Construction - Concrete 1 45 days	Aerial Lifts	2	8.00	62	0.31
Construction - Concrete 1 45 days	Cement and Mortar Mixers	1	8.00	9	0.56
Construction - Concrete 2 10 days	Pressure Washers	2	8.00	13	0.30

Architectural Coating	Aerial Lifts	1	8.00	62	0.31
Architectural Coating	Air Compressors	2	7.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Welders	2	8.00	46	0.45
Site Prep - Site Work	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Plate Compactors	2	8.00	8	0.43
Grading - Site Work	Rubber Tired Loaders	1	8.00	199	0.36
Grading - Site Work	Scrapers	1	8.00	361	0.48
Site Prep - Site Work	Plate Compactors	1	8.00	8	0.43

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Construction - Concrete 1 45 days	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction - Concrete 2 10 days	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	30.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading - Site Work	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep - Site Work	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0517	0.3234	0.2036	2.9000e-004		0.0193	0.0193		0.0184	0.0184	0.0000	25.4722	25.4722	7.7500e-003	0.0000	25.6350
Total	**0.0517**	**0.3234**	**0.2036**	**2.9000e-004**		**0.0193**	**0.0193**		**0.0184**	**0.0184**	**0.0000**	**25.4722**	**25.4722**	**7.7500e-003**	**0.0000**	**25.6350**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.6000e-004	5.5900e-003	5.6500e-003	1.0000e-005	2.7000e-004	1.6000e-004	4.3000e-004	8.0000e-005	1.5000e-004	2.3000e-004	0.0000	0.8470	0.8470	1.0000e-005	0.0000	0.8472
Worker	3.1500e-003	4.6100e-003	0.0463	8.0000e-005	7.0900e-003	6.0000e-005	7.1400e-003	1.8800e-003	5.0000e-005	1.9300e-003	0.0000	6.6915	6.6915	3.8000e-004	0.0000	6.6994
Total	**3.7100e-003**	**0.0102**	**0.0519**	**9.0000e-005**	**7.3600e-003**	**2.2000e-004**	**7.5700e-003**	**1.9600e-003**	**2.0000e-004**	**2.1600e-003**	**0.0000**	**7.5385**	**7.5385**	**3.9000e-004**	**0.0000**	**7.5466**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0517	0.3234	0.2036	2.9000e-004		0.0193	0.0193		0.0184	0.0184	0.0000	25.4721	25.4721	7.7500e-003	0.0000	25.6350
Total	**0.0517**	**0.3234**	**0.2036**	**2.9000e-004**		**0.0193**	**0.0193**		**0.0184**	**0.0184**	**0.0000**	**25.4721**	**25.4721**	**7.7500e-003**	**0.0000**	**25.6350**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.6000e-004	5.5900e-003	5.6500e-003	1.0000e-005	2.7000e-004	1.6000e-004	4.3000e-004	8.0000e-005	1.5000e-004	2.3000e-004	0.0000	0.8470	0.8470	1.0000e-005	0.0000	0.8472
Worker	3.1500e-003	4.6100e-003	0.0463	8.0000e-005	7.0900e-003	6.0000e-005	7.1400e-003	1.8800e-003	5.0000e-005	1.9300e-003	0.0000	6.6915	6.6915	3.8000e-004	0.0000	6.6994
Total	**3.7100e-003**	**0.0102**	**0.0519**	**9.0000e-005**	**7.3600e-003**	**2.2000e-004**	**7.5700e-003**	**1.9600e-003**	**2.0000e-004**	**2.1600e-003**	**0.0000**	**7.5385**	**7.5385**	**3.9000e-004**	**0.0000**	**7.5466**

3.2 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0232	0.1492	0.0968	1.4000e-004		8.6400e-003	8.6400e-003		8.2400e-003	8.2400e-003	0.0000	12.3973	12.3973	3.6600e-003	0.0000	12.4742
Total	**0.0232**	**0.1492**	**0.0968**	**1.4000e-004**		**8.6400e-003**	**8.6400e-003**		**8.2400e-003**	**8.2400e-003**	**0.0000**	**12.3973**	**12.3973**	**3.6600e-003**	**0.0000**	**12.4742**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3000e-004	2.4200e-003	2.4800e-003	0.0000	1.3000e-004	5.0000e-005	1.8000e-004	4.0000e-005	5.0000e-005	9.0000e-005	0.0000	0.4117	0.4117	0.0000	0.0000	0.4118
Worker	1.3600e-003	1.9900e-003	0.0200	4.0000e-005	3.4600e-003	2.0000e-005	3.4900e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	3.1758	3.1758	1.7000e-004	0.0000	3.1793
Total	**1.5900e-003**	**4.4100e-003**	**0.0225**	**4.0000e-005**	**3.5900e-003**	**7.0000e-005**	**3.6700e-003**	**9.6000e-004**	**7.0000e-005**	**1.0300e-003**	**0.0000**	**3.5875**	**3.5875**	**1.7000e-004**	**0.0000**	**3.5911**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0232	0.1492	0.0968	1.4000e-004		8.6400e-003	8.6400e-003		8.2400e-003	8.2400e-003	0.0000	12.3973	12.3973	3.6600e-003	0.0000	12.4742
Total	**0.0232**	**0.1492**	**0.0968**	**1.4000e-004**		**8.6400e-003**	**8.6400e-003**		**8.2400e-003**	**8.2400e-003**	**0.0000**	**12.3973**	**12.3973**	**3.6600e-003**	**0.0000**	**12.4742**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3000e-004	2.4200e-003	2.4800e-003	0.0000	1.3000e-004	5.0000e-005	1.8000e-004	4.0000e-005	5.0000e-005	9.0000e-005	0.0000	0.4117	0.4117	0.0000	0.0000	0.4118
Worker	1.3600e-003	1.9900e-003	0.0200	4.0000e-005	3.4600e-003	2.0000e-005	3.4900e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	3.1758	3.1758	1.7000e-004	0.0000	3.1793
Total	**1.5900e-003**	**4.4100e-003**	**0.0225**	**4.0000e-005**	**3.5900e-003**	**7.0000e-005**	**3.6700e-003**	**9.6000e-004**	**7.0000e-005**	**1.0300e-003**	**0.0000**	**3.5875**	**3.5875**	**1.7000e-004**	**0.0000**	**3.5911**

3.3 Construction - Concrete 1 45 days - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7000e-003	0.0638	0.0528	8.0000e-005		3.2300e-003	3.2300e-003		3.0000e-003	3.0000e-003	0.0000	7.6699	7.6699	2.0700e-003	0.0000	7.7135
Total	**4.7000e-003**	**0.0638**	**0.0528**	**8.0000e-005**		**3.2300e-003**	**3.2300e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**7.6699**	**7.6699**	**2.0700e-003**	**0.0000**	**7.7135**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	5.4600e-003	5.5200e-003	1.0000e-005	2.6000e-004	1.6000e-004	4.2000e-004	7.0000e-005	1.5000e-004	2.2000e-004	0.0000	0.8273	0.8273	1.0000e-005	0.0000	0.8275
Worker	8.2000e-004	1.2000e-003	0.0121	2.0000e-005	1.8500e-003	1.0000e-005	1.8600e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.7429	1.7429	1.0000e-004	0.0000	1.7450
Total	**1.3700e-003**	**6.6600e-003**	**0.0176**	**3.0000e-005**	**2.1100e-003**	**1.7000e-004**	**2.2800e-003**	**5.6000e-004**	**1.6000e-004**	**7.2000e-004**	**0.0000**	**2.5702**	**2.5702**	**1.1000e-004**	**0.0000**	**2.5725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7000e-003	0.0638	0.0528	8.0000e-005		3.2300e-003	3.2300e-003		3.0000e-003	3.0000e-003	0.0000	7.6699	7.6699	2.0700e-003	0.0000	7.7135
Total	**4.7000e-003**	**0.0638**	**0.0528**	**8.0000e-005**		**3.2300e-003**	**3.2300e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**7.6699**	**7.6699**	**2.0700e-003**	**0.0000**	**7.7135**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	5.4600e-003	5.5200e-003	1.0000e-005	2.6000e-004	1.6000e-004	4.2000e-004	7.0000e-005	1.5000e-004	2.2000e-004	0.0000	0.8273	0.8273	1.0000e-005	0.0000	0.8275
Worker	8.2000e-004	1.2000e-003	0.0121	2.0000e-005	1.8500e-003	1.0000e-005	1.8600e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.7429	1.7429	1.0000e-004	0.0000	1.7450
Total	**1.3700e-003**	**6.6600e-003**	**0.0176**	**3.0000e-005**	**2.1100e-003**	**1.7000e-004**	**2.2800e-003**	**5.6000e-004**	**1.6000e-004**	**7.2000e-004**	**0.0000**	**2.5702**	**2.5702**	**1.1000e-004**	**0.0000**	**2.5725**

3.3 Construction - Concrete 1 45 days - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9000e-004	3.9900e-003	3.7400e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.7000e-004	1.7000e-004	0.0000	0.5454	0.5454	1.5000e-004	0.0000	0.5485
Total	**2.9000e-004**	**3.9900e-003**	**3.7400e-003**	**1.0000e-005**		**1.9000e-004**	**1.9000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**0.5454**	**0.5454**	**1.5000e-004**	**0.0000**	**0.5485**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	3.5000e-004	3.5000e-004	0.0000	2.0000e-005	1.0000e-005	3.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	0.0588	0.0588	0.0000	0.0000	0.0588
Worker	5.0000e-005	8.0000e-005	7.6000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1210	0.1210	1.0000e-005	0.0000	0.1211
Total	**8.0000e-005**	**4.3000e-004**	**1.1100e-003**	**0.0000**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**5.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.1798**	**0.1798**	**1.0000e-005**	**0.0000**	**0.1800**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9000e-004	3.9900e-003	3.7400e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.7000e-004	1.7000e-004	0.0000	0.5454	0.5454	1.5000e-004	0.0000	0.5485
Total	**2.9000e-004**	**3.9900e-003**	**3.7400e-003**	**1.0000e-005**		**1.9000e-004**	**1.9000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**0.5454**	**0.5454**	**1.5000e-004**	**0.0000**	**0.5485**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	3.5000e-004	3.5000e-004	0.0000	2.0000e-005	1.0000e-005	3.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	0.0588	0.0588	0.0000	0.0000	0.0588
Worker	5.0000e-005	8.0000e-005	7.6000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1210	0.1210	1.0000e-005	0.0000	0.1211
Total	**8.0000e-005**	**4.3000e-004**	**1.1100e-003**	**0.0000**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**5.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.1798**	**0.1798**	**1.0000e-005**	**0.0000**	**0.1800**

3.4 Construction - Concrete 2 10 days - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0213	0.0747	0.0676	9.0000e-005		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003	0.0000	6.9447	6.9447	1.7400e-003	0.0000	6.9812
Total	**0.0213**	**0.0747**	**0.0676**	**9.0000e-005**		**6.4700e-003**	**6.4700e-003**		**6.4700e-003**	**6.4700e-003**	**0.0000**	**6.9447**	**6.9447**	**1.7400e-003**	**0.0000**	**6.9812**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	7.1000e-004	7.1700e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0374	1.0374	6.0000e-005	0.0000	1.0387
Total	**4.9000e-004**	**7.1000e-004**	**7.1700e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0374**	**1.0374**	**6.0000e-005**	**0.0000**	**1.0387**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0213	0.0747	0.0676	9.0000e-005		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003	0.0000	6.9447	6.9447	1.7400e-003	0.0000	6.9812
Total	**0.0213**	**0.0747**	**0.0676**	**9.0000e-005**		**6.4700e-003**	**6.4700e-003**		**6.4700e-003**	**6.4700e-003**	**0.0000**	**6.9447**	**6.9447**	**1.7400e-003**	**0.0000**	**6.9812**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	7.1000e-004	7.1700e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0374	1.0374	6.0000e-005	0.0000	1.0387
Total	**4.9000e-004**	**7.1000e-004**	**7.1700e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0374**	**1.0374**	**6.0000e-005**	**0.0000**	**1.0387**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.0700	0.0479	7.0000e-005		5.9100e-003	5.9100e-003		5.8700e-003	5.8700e-003	0.0000	6.4214	6.4214	1.1800e-003	0.0000	6.4463
Total	**0.4148**	**0.0700**	**0.0479**	**7.0000e-005**		**5.9100e-003**	**5.9100e-003**		**5.8700e-003**	**5.8700e-003**	**0.0000**	**6.4214**	**6.4214**	**1.1800e-003**	**0.0000**	**6.4463**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	4.9000e-004	4.8800e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7055	0.7055	4.0000e-005	0.0000	0.7063
Total	**3.3000e-004**	**4.9000e-004**	**4.8800e-003**	**1.0000e-005**	**7.5000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7055**	**0.7055**	**4.0000e-005**	**0.0000**	**0.7063**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.0700	0.0479	7.0000e-005		5.9100e-003	5.9100e-003		5.8700e-003	5.8700e-003	0.0000	6.4214	6.4214	1.1800e-003	0.0000	6.4463
Total	**0.4148**	**0.0700**	**0.0479**	**7.0000e-005**		**5.9100e-003**	**5.9100e-003**		**5.8700e-003**	**5.8700e-003**	**0.0000**	**6.4214**	**6.4214**	**1.1800e-003**	**0.0000**	**6.4463**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	4.9000e-004	4.8800e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7055	0.7055	4.0000e-005	0.0000	0.7063
Total	**3.3000e-004**	**4.9000e-004**	**4.8800e-003**	**1.0000e-005**	**7.5000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7055**	**0.7055**	**4.0000e-005**	**0.0000**	**0.7063**

3.5 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3093					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2100e-003	0.0496	0.0362	6.0000e-005		4.0700e-003	4.0700e-003		4.0400e-003	4.0400e-003	0.0000	4.9053	4.9053	8.6000e-004	0.0000	4.9233
Total	**0.3165**	**0.0496**	**0.0362**	**6.0000e-005**		**4.0700e-003**	**4.0700e-003**		**4.0400e-003**	**4.0400e-003**	**0.0000**	**4.9053**	**4.9053**	**8.6000e-004**	**0.0000**	**4.9233**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	3.3000e-004	3.3100e-003	1.0000e-005	5.7000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.5243	0.5243	3.0000e-005	0.0000	0.5248
Total	**2.2000e-004**	**3.3000e-004**	**3.3100e-003**	**1.0000e-005**	**5.7000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5243**	**0.5243**	**3.0000e-005**	**0.0000**	**0.5248**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3093					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2100e-003	0.0496	0.0362	6.0000e-005		4.0700e-003	4.0700e-003		4.0400e-003	4.0400e-003	0.0000	4.9053	4.9053	8.6000e-004	0.0000	4.9233
Total	**0.3165**	**0.0496**	**0.0362**	**6.0000e-005**		**4.0700e-003**	**4.0700e-003**		**4.0400e-003**	**4.0400e-003**	**0.0000**	**4.9053**	**4.9053**	**8.6000e-004**	**0.0000**	**4.9233**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	3.3000e-004	3.3100e-003	1.0000e-005	5.7000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.5243	0.5243	3.0000e-005	0.0000	0.5248
Total	**2.2000e-004**	**3.3000e-004**	**3.3100e-003**	**1.0000e-005**	**5.7000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5243**	**0.5243**	**3.0000e-005**	**0.0000**	**0.5248**

3.6 Grading - Site Work - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9400e-003	0.0650	0.0345	5.0000e-005		2.5100e-003	2.5100e-003		2.3100e-003	2.3100e-003	0.0000	5.0595	5.0595	1.5000e-003	0.0000	5.0909
Total	**4.9400e-003**	**0.0650**	**0.0345**	**5.0000e-005**	**5.3000e-004**	**2.5100e-003**	**3.0400e-003**	**6.0000e-005**	**2.3100e-003**	**2.3700e-003**	**0.0000**	**5.0595**	**5.0595**	**1.5000e-003**	**0.0000**	**5.0909**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1260	0.1260	1.0000e-005	0.0000	0.1262
Total	**5.0000e-005**	**8.0000e-005**	**8.0000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1260**	**0.1260**	**1.0000e-005**	**0.0000**	**0.1262**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1000e-004	0.0000	2.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9400e-003	0.0650	0.0345	5.0000e-005		2.5100e-003	2.5100e-003		2.3100e-003	2.3100e-003	0.0000	5.0595	5.0595	1.5000e-003	0.0000	5.0909
Total	**4.9400e-003**	**0.0650**	**0.0345**	**5.0000e-005**	**2.1000e-004**	**2.5100e-003**	**2.7200e-003**	**2.0000e-005**	**2.3100e-003**	**2.3300e-003**	**0.0000**	**5.0595**	**5.0595**	**1.5000e-003**	**0.0000**	**5.0909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1260	0.1260	1.0000e-005	0.0000	0.1262
Total	**5.0000e-005**	**8.0000e-005**	**8.0000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1260**	**0.1260**	**1.0000e-005**	**0.0000**	**0.1262**

3.7 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9900e-003	0.0206	0.0126	2.0000e-005		1.2000e-003	1.2000e-003		1.1100e-003	1.1100e-003	0.0000	1.7514	1.7514	4.9000e-004	0.0000	1.7616
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9900e-003**	**0.0206**	**0.0126**	**2.0000e-005**		**1.2000e-003**	**1.2000e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**1.7514**	**1.7514**	**4.9000e-004**	**0.0000**	**1.7616**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.5900e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2521	0.2521	1.0000e-005	0.0000	0.2523
Total	**1.1000e-004**	**1.6000e-004**	**1.5900e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2521**	**0.2521**	**1.0000e-005**	**0.0000**	**0.2523**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9900e-003	0.0206	0.0126	2.0000e-005		1.2000e-003	1.2000e-003		1.1100e-003	1.1100e-003	0.0000	1.7514	1.7514	4.9000e-004	0.0000	1.7616
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9900e-003**	**0.0206**	**0.0126**	**2.0000e-005**		**1.2000e-003**	**1.2000e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**1.7514**	**1.7514**	**4.9000e-004**	**0.0000**	**1.7616**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.6000e-004	1.5900e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2521	0.2521	1.0000e-005	0.0000	0.2523
Total	**1.1000e-004**	**1.6000e-004**	**1.5900e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2521**	**0.2521**	**1.0000e-005**	**0.0000**	**0.2523**

3.8 Site Prep - Site Work - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	5.7800e-003	3.4900e-003	0.0000		4.9000e-004	4.9000e-004		4.5000e-004	4.5000e-004	0.0000	0.4136	0.4136	1.1000e-004	0.0000	0.4159
Total	**7.1000e-004**	**5.7800e-003**	**3.4900e-003**	**0.0000**	**2.7000e-004**	**4.9000e-004**	**7.6000e-004**	**3.0000e-005**	**4.5000e-004**	**4.8000e-004**	**0.0000**	**0.4136**	**0.4136**	**1.1000e-004**	**0.0000**	**0.4159**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	5.0000e-005	4.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0756	0.0756	0.0000	0.0000	0.0757
Total	**3.0000e-005**	**5.0000e-005**	**4.8000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0756**	**0.0756**	**0.0000**	**0.0000**	**0.0757**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	5.7800e-003	3.4900e-003	0.0000		4.9000e-004	4.9000e-004		4.5000e-004	4.5000e-004	0.0000	0.4136	0.4136	1.1000e-004	0.0000	0.4159
Total	**7.1000e-004**	**5.7800e-003**	**3.4900e-003**	**0.0000**	**1.0000e-004**	**4.9000e-004**	**5.9000e-004**	**1.0000e-005**	**4.5000e-004**	**4.6000e-004**	**0.0000**	**0.4136**	**0.4136**	**1.1000e-004**	**0.0000**	**0.4159**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	5.0000e-005	4.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0756	0.0756	0.0000	0.0000	0.0757
Total	**3.0000e-005**	**5.0000e-005**	**4.8000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0756**	**0.0756**	**0.0000**	**0.0000**	**0.0757**

APPENDIX B

Localized Significance Threshold Analysis

LOCALIZED SIGNIFICANCE THRESHOLDS ANALYSIS FOR CONSTRUCTION IMPACTS OF THE RIVERSIDE COMMUNITY HOSPITAL SPECIFIC PLAN EXPANSION PROJECT

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SUMMARY

This study analyzes the impacts of the construction emissions (fugitive dust and mobile equipment exhaust) resulting from the construction of the proposed Riverside Community Hospital (RCH) Specific Plan Expansion Project (project) on ambient air quality concentrations in the vicinity of the construction site. The operational emissions associated with stationary sources (i.e., boilers, emergency generators) would not likely exceed the Localized Significance Thresholds (LST) for operational emissions per South Coast Air Quality Management District (SCAQMD) Rules 1303 (Requirements) and 1304 (Exemptions) and are therefore not further analyzed in this LST report.

As related to the construction of a project, the LST analysis is intended to evaluate whether the emissions associated with construction of a project could result in exceedances of the LSTs at sensitive receptors, which would be considered significant air quality impacts and trigger the need for implementing mitigation measures. The analysis does not disclose the potential impacts from every possible combination of construction emissions, meteorological conditions, and receptor locations. For larger, complex projects, representative scenarios, which would likely generate the maximum potential impacts, may be selected. Selection criteria include the maximum daily construction emissions and the relative locations of the construction areas and sensitive receptors.

The ambient air quality impacts are compared to thresholds established by the (SCAQMD. The thresholds for nitrogen dioxide (NO_2) and carbon monoxide (CO) represent the allowable increase in concentrations above background levels in the vicinity of the project that would not cause or contribute to an exceedance of the relevant ambient air quality standards. For construction impacts, the significance threshold for particulate matter equal to or less than 10 microns (PM_{10}) represents compliance with Rule 403 (Fugitive Dust). The significance threshold for particulate matter equal to or less than 2.5 microns ($PM_{2.5}$) is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards.

The LST analysis shows that maximum 1-hour NO_2 and 24-hour PM_{10} and $PM_{2.5}$ concentrations would exceed the thresholds of significance established by the SCAQMD at the hospital and other sensitive receptors in the vicinity of the project site. For the purposes of this assessment, sensitive receptors include residences, an elementary school, several childcare centers, and hospital buildings that would house patients for longer-term care. The maximum impacts and their locations are provided in the report. The 1-hour and 8-hour CO concentrations would not exceed the thresholds of significance at any sensitive receptor.

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Localized Significance Thresholds Analysis for Construction Impacts of the Riverside Community Hospital Specific Plan Expansion Project

1.0 GENERAL

1.1 Background and Project Description

Project Setting

The Riverside Community Hospital (RCH) is located within the City of Riverside in the northwestern portion of Riverside County, California. The approximately 22.5-acre site is located at 4445 Magnolia Avenue in Riverside, California, approximately 0.42 mile west of State Route 91 (SR 91) and approximately 1.60 miles south of SR 60. The site is bounded by 14th Street to the north, Brockton Avenue to the west, and Magnolia Avenue to the east. Evans Sports Complex (comprising athletic fields for Riverside Community College), Tequesquite Avenue, and residential development are located to the south (see Figure 1, Regional Map; Figure 2, Vicinity Map; and Figure 3, Site Plan, in the Air Quality Technical Report and Greenhouse Gas Emissions Analysis for the project (AQ/GHG Analysis; Dudek 2013)).

Project Description

RCH is proposing a new Specific Plan (SP) on the project site. A site master plan has been developed that includes both short-term and long-range planning goals that cover construction on the RCH campus over a 30-year period. The SP will be divided into phases: Phases I, IIa, IIb, and IIc (see Dudek 2013, Figure 3, Site Plan). The primary focus of Phase I of the proposed RCH SP Expansion Project (project) is to construct a new hospital bed tower to alleviate seismic concerns associated with existing buildings and to meet seismic retrofit requirements as required by Senate Bill 1953. Phases IIa, IIb, and IIc of the project also address seismic concerns and include future and possible long-range development. Phases I, IIa, IIb, and IIc of the project are described in the AQ/GHG Analysis (Dudek 2013).

For the purposes of this analysis, construction emissions for the project were only analyzed for Phase I and Phase IIb as representative scenarios. Phase IIa emissions were not evaluated because the estimated emissions associated this phase would be lower than those for the other two phases and the Phase IIa construction area is farther away from off-site sensitive receptors than those for Phase I and Phase IIb. Thus, the evaluation of the Phase I and Phase IIb scenarios would result in the maximum impacts for this Localized Significance Thresholds Analysis (LST Analysis). Analysis of these representative scenarios is sufficient to determine whether the project's construction emissions would cause exceedances of any LSTs at sensitive receptors and result in significant impacts to ambient air quality. At this time, since specific development plans are not known for Phase IIc of the project, Phase IIc was not considered as part of this analysis. However, potential LST impacts associated with Phase IIc of the project will be analyzed qualitatively in the Air Quality Section of the Draft Environmental Impact Report (EIR), and

proposed mitigation measures will be applied to Phase IIc where applicable to ensure future assessment of the impacts of Phase IIc.

Phase I would occur sometime between 2014 and 2017; it is assumed that construction of Phase I of the project would commence June 2014 and would last approximately 2 years and 8 months, ending in February 2017. Phase IIb would occur sometime between 2024 and 2027; it is assumed that construction of Phase IIb of the project would commence June 2024 and would last approximately 3 years and 5 months, ending in November 2027. The precise construction dates are not known and the actual dates may be somewhat different, but the estimated dates are needed for the purpose of calculating the construction emissions. Construction work includes demolition; clearing and grading; construction of hospital towers and other related hospital use facilities; trenching; connection of water, sewer, and storm drains; installation of electrical, gas, and phone lines; site fine grading, base, and paving; installation of lighting; and installation of landscaping and irrigation.

Modeled construction phases and estimated phase duration (approximate) include the following:

Phase I Construction Schedule

- Demolition: June 2014 (2 months)
- Grading: October 2014 (1.5 weeks)
- Trenching: October 2014 (1.5 weeks)
- Building construction: November 2014 (18.5 months)
- Architectural coating: June 2016 (4 months)
- Paving: December 2016 (2 months).

Phase IIb Construction Schedule

- Demolition: June 2024 (5 months)
- Grading: January 2025 (3 weeks)
- Trenching: February 2025 (2 weeks)
- Building construction: March 2025 (22 months)
- Architectural coating: February 2027 (5 months)
- Paving: August 2027 (3 months).

Additional details regarding the project are provided in the AQ/GHG Analysis.

1.2 Regional Air Quality

The project is located in the South Coast Air Basin (SCAB) portion of Riverside County, which is an extreme nonattainment area for the federal 8-hour ozone (O_3) standard and a nonattainment area for the state 1-hour and 8-hour O_3 standards. Also, it has been designated as a nonattainment area for the federal 24-hour and annual fine particulate matter ($PM_{2.5}$) standards and a nonattainment area for the state 24-hour and annual respirable particulate matter (PM_{10}) standards and the state annual $PM_{2.5}$ standard. It is an attainment area for the federal 24-hour PM_{10} standard. The SCAB is designated as an unclassifiable/attainment area for the federal annual nitrogen dioxide (NO_2) standard and as a nonattainment area for the state NO_2 standards. It has been designated as an attainment area for state and federal 1-hour and 8-hour carbon monoxide (CO) standards.

1.3 Thresholds of Significance

Table 1 shows the peak background concentrations of NO_2 and CO for Source Receptor Area (SRA) 23 in the vicinity of the project for the period from 2010 through 2012. These are the values on which LST criteria for NO_2 and CO are based, as described in the South Coast Air Quality Management District's (SCAQMD's) *Final Localized Significance Threshold Methodology* (LST Methodology; SCAQMD 2008). Additional information regarding the background air quality data is provided in Section 5.2 of the AQ/GHG Analysis (Dudek 2013).

Table 1
Peak Background Concentrations for SRA 23 (2010–2012)

Pollutant	Averaging Period	Unit	2010	2011	2012	Peak Concentration
NO_2	1 hour	ppm	0.061	0.057	0.060	0.061
CO	1 hour	ppm	2.5	3.1	2.7	3.1
CO	8 hours	ppm	1.73	1.49	1.46	1.73

Source: EPA 2013; CARB 2013. Data are from the Riverside-Magnolia Avenue and Rubidoux Mission Boulevard monitoring stations, the nearest air quality monitoring stations to the project area. The Riverside-Magnolia Monitoring Station, locatd at 7002 Magnolia Avenue, Riverside, California, is approximately 2.2 miles southwest from the project site. The Riverside-Rubidoux Monitoring Station, located at 5888 Mission Boulevard, Rubidoux, California, is approximately 2.4 miles southeast from the project site.
NO_2 = nitrogen dioxide; ppm = parts per million; CO = carbon monoxide
PM_{10} and $PM_{2.5}$ thresholds are not based on background concentrations and are therefore not included in this table.

Table 2 shows the threshold criteria recommended by the SCAQMD for determining whether the emissions resulting from construction of a development project have the potential to generate significant adverse local impacts on ambient air quality. The SCAQMD's concentration-based PM_{10} threshold from its LST Methodology (SCAQMD 2008) is a 24-hour average concentration of 10.4 micrograms per cubic meter ($\mu g/m^3$) based on compliance with Rule 403. The

significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards. The thresholds for NO_2 and CO were based on the maximum concentrations that occurred during the last 3 years (2010 to 2012), as shown in Table 1. These thresholds represent the allowable increase in NO_2 and CO ambient concentrations above current levels that could occur in SRA 23 without causing or contributing to exceedances of the California Ambient Air Quality Standards (CAAQS). For reference, the applicable CAAQS are also shown in Table 2.

Table 2
Localized Significance Thresholds Pollutant

	Averaging Period	CAAQS/NAAQS		Peak Concentration (ppm)	LST Criteria[a]	
		µg/m³	*ppm*			
NO_2	1 hour	339	0.18	0.061	224	0.12
CO	1 hour	23,000	20	3.10	19,340	16.9
CO	8 hours	10,000	9.0	1.73	8,319	7.3
PM_{10}	24 hours	50	—	N/A	10.4	—
$PM_{2.5}$[b]	24 hours	35	—	N/A	10.4	—

Source: SCAQMD 2008.
CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; LST = localized significance thresholds; µg/m³ = micrograms per cubic meter; ppm = parts per million; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter

[a] LST criteria for NO_2 and CO are the differences between CAAQS and the peak concentration.

[b] California has not adopted a 24-hour ambient air quality standard for $PM_{2.5}$. The 24-hour $PM_{2.5}$ ambient air quality standard shown is the national standard (NAAQS).

2.0 EMISSION ESTIMATION METHODOLOGY

Unmitigated construction emissions of oxides of nitrogen (NO_x), CO, PM_{10}, and $PM_{2.5}$ were estimated using the California Emissions Estimator Model (CalEEMod, Version 2013.2.2; ENVIRON 2013) land use and air emissions model, which is available online. The SCAQMD recommends CalEEMod be used to evaluate a project's emissions if software is used for the analysis (SCAQMD 2013a). It is designed to estimate air emissions from new development projects, including construction emissions. The emissions are estimated based on the overall phasing information provided by the applicant and estimated periods for construction phases. The key emission estimation assumptions are described in Section 1.1.

Additional details regarding the calculation of construction emissions are found in the AQ/GHG Analysis (Dudek 2013).

The maximum daily on-site emissions that could occur on the project site during Phase I and Phase IIb were selected for the LST Analysis. The maximum daily construction emissions are shown in Table 3.

Table 3
Estimated Construction Emissions Associated with the Project

Pollutant	Maximum Daily Emissions (pounds per day)	
	Fugitive Dust	*On-Site Exhaust*
Phase I		
NO_x	—	48.27
CO	—	35.51
PM_{10}	5.16	2.20
$PM_{2.5}$	2.58	2.08
Phase IIb		
NO_x	—	22.39
CO	—	35.48
PM_{10}	6.72	0.63
$PM_{2.5}$	3.41	0.59

NO_x = oxides of nitrogen; CO = carbon monoxide; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter

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3.0 DISPERSION MODELING ANALYSIS

3.1 Modeling Approach

Ambient NO_2, CO, PM_{10}, and $PM_{2.5}$ concentrations due to the construction of the project were analyzed using the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) dispersion model (Lakes Environmental 2013), Version 8.1. This model can estimate the air quality impacts of single or multiple point, area, or volume sources using actual meteorological conditions. Volume sources were used to represent the emissions from heavy-duty construction equipment. Area sources were used to model fugitive dust emissions of PM_{10} and $PM_{2.5}$.

The modeling approach used in this analysis is described in the following subsections.

Emission Sources

Two areas were designated where the Phase I and Phase IIb construction emissions would be located. Off-road equipment (e.g., diesel-powered construction equipment such as excavators and dozers) used during Phase I demolition of the project site would create the maximum daily exhaust emissions of NO_x and CO, and off-road equipment during Phase I grading of the project site would create the maximum daily exhaust emissions of PM_{10} and $PM_{2.5}$, based on the CalEEMod results. Off-road equipment used during Phase IIb demolition of the project site would create the maximum daily exhaust emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$, based on the CalEEmod results. Volume sources of these emissions, corresponding to the emission rates in Table 3, were placed in their respective phase construction areas. Volume sources were given dimensions of 33 feet by 33 feet (10 meters by 10 meters); a release height of 16 feet (5 meters), to represent the midrange of the expected plume rise from frequently used construction equipment during daytime atmospheric conditions; and an initial vertical dimension of 4.6 feet (1.4 meters). The release height and initial vertical dimensions are the same as those in the LST Methodology (SCAQMD 2008). Source groups of 15 (Phase I) and 10 (Phase IIb) volume sources were used to represent each of the construction areas.

Fugitive dust emissions were treated as area sources distributed over Phase I and Phase IIb construction areas, having an area of approximately 1.18 acres and 0.67 acre, respectively. In accordance with the LST Methodology (SCAQMD 2008), the area sources were given a ground-level release height and a 3.3-foot (1-meter) initial vertical dimension to represent the initial vertical spread of the emissions.

Receptors

Sensitive receptors are those that are more susceptible to the effects of air pollution than the population at large. The SCAQMD considers that sensitive receptors may include residences, schools, playgrounds, childcare centers, athletic facilities, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). The closest off-site sensitive receptors to the project site include several residential areas, one elementary school, and three childcare centers or preschools. Evans Sports Complex, which comprises the athletic fields for Riverside Community College, was not identified as a sensitive receptor for this analysis because the typical users (college students) are considered healthy adults. Newman Park, located at the southeast corner of 14th Street and Magnolia Avenue, east of the hospital campus, is a small green space not highly used by children or the elderly, and was not considered a sensitive receptor. Much of the neighboring area consists of commercial and other nonresidential land uses. In addition, at the recommendation of SCAQMD staff, the buildings at RCH that house patients for longer-term care (i.e., buildings with licensed beds) (McMillan, pers. comm. 2013a) are also included in this analysis as sensitive receptors. While the Calvary Presbyterian Church, located 130 feet (40 meters) south of the project site boundary, is not considered a sensitive receptor, it was included as a nearby noncommercial receptor where children and the elderly are present. The sensitive receptors were identified as groups of discrete receptors in the model input. The discrete receptors were spaced approximately 5 meters apart to densely cover the areas in which the sensitive receptors are located (e.g., residences, school, hospital). The names of the off-site receptors, except for residential areas, and their orientation with regard to the hospital site are shown in Table 4.

Per the LST Methodology (SCAQMD 2008), the flagpole receptor height for all receptors was set at 6.6 feet (2.0 meters).

Table 4
Sensitive Receptors

Name	Direction from Hospital
Grant Elementary School and Childcare Center	Northwest
Riverside Community College Daycare	Southeast
Eden Lutheran Preschool	Southwest
Calvary Presbyterian Church[a]	South

[a] As noted above, the Calvary Presbyterian Church would not be considered a sensitive receptor but is included because children and the elderly are present.

Terrain data from the U.S. Geological Survey were entered using Digital Elevation Model data for the area in the vicinity of the project site from the AERMAP module of AERMOD.

Meteorological Data

The Riverside-Magnolia Avenue station was identified as the representative meteorological monitoring station for the project. Data from this station were used to represent the meteorological conditions in SRA 23. AERMOD-ready data for 2005 to 2009 were obtained from SCAQMD (SCAQMD 2013b). A wind rose of the surface meteorological data is shown in Figure 1.

Model Options

The following model options were selected in accordance with SCAQMD guidance:

- Regulatory defaults (except for NO_2, which was run using the non-default options to enable the modeling conversion of NO_x to NO_2, as discussed in the following section)
- Urban option (SCAQMD 2013c)
- Averaging periods: 1 hour (CO and NO_2), 8 hours (CO), and 24 hours (PM_{10} and $PM_{2.5}$) (SCAQMD 2008).

Adjustment of NO_2 Impacts

The LST Methodology (SCAQMD 2008) discusses an adjustment of the NO_2 impacts due to the fact that most of NO_x in the combustion exhaust will occur in the form of nitric oxide (NO) rather than as NO_2. Nitric oxide is converted to NO_2 in the atmosphere through chemical reactions.

To evaluate the conversion of NO from construction equipment exhaust to ambient NO_2, the Plume Volume Molar Ratio Method (PVMRM) was used, which is accepted by SCAQMD (SCAQMD 2013d). The PVMRM simulates the reaction of NO with O_3 and its resultant conversion to NO_2. The amount of NO_2 formed depends on the availability of O_3 in the atmosphere. The PVMRM determines the conversion rate for NO_x to NO_2 based on a calculation of the NO_x moles emitted into the plume, and the amount of O_3 moles contained within the volume of the plume between the source and receptor.

The following default values were used for the PVMRM:

- Ambient equilibrium NO_2/NO_x ratio = 0.90 (McMillan, pers. comm. 2013b)
- In-stack NO_2/NO_x ratio = 0.20 (CAPCOA 2011)
- Default O_3 value = 40 ppb (parts per billion; McMillan, pers. comm. 2013b).

O_3 data were obtained from the SCAQMD (SCAQMD 2013d) for the period from 2005 to 2009.

3.2 Project-Specific Impacts

The maximally impacted residential receptors and sensitive receptor (Grant Elementary School and childcare center) are located directly northwest of the project site.

Table 5 and Table 6 show the maximum NO_2, CO, PM_{10}, and $PM_{2.5}$ concentrations associated with construction of Phase I and Phase IIb of the project at residential, hospital, and other sensitive receptors. For purposes of this analysis, the results for the fence-line receptors along the boundary of the project site were not identified as points of maximum impact because the boundary is not directly adjacent to a property inhabited by a sensitive receptor (e.g., a residence). Selected modeling results are included in Appendix A.

Table 5
Modeling Results – Phase I

Pollutant	Averaging Period	Modeled Impacts		LST Criteria		Exceeds Threshold?
		µg/m³	*ppm*	*µg/m³*	*ppm*	
Residential Receptors						
NO_2	1 hour	106	0.06	224	0.12	No
CO	1 hour	176	0.15	19,340	16.9	No
CO	8 hours	41	0.04	8,319	7.3	No
PM_{10}	24 hours	8.1	—	10.4	—	No
$PM_{2.5}$	24 hours	4.5	—	10.4	—	No
Hospital Receptors						
NO_2	1 hour	1,031	0.55	224	0.12	Yes
CO	1 hour	1,086	0.95	19,340	16.9	No
CO	8 hours	452	0.40	8,319	7.3	No
PM_{10}	24 hours	187.9	—	10.4	—	Yes
$PM_{2.5}$	24 hours	99.1	—	10.4	—	Yes
Other Sensitive Receptors						
NO_2	1 hour	242	0.13	224	0.12	Yes
CO	1 hour	508	0.44	19,340	16.9	No
CO	8 hours	116	0.10	8,319	7.3	No
PM_{10}	24 hours	18.3	—	10.4	—	Yes
$PM_{2.5}$	24 hours	10.7	—	10.4	—	Yes

µg/m3 = micrograms per cubic meter; ppm = parts per million; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter

Table 6
Modeling Results – Phase IIb

Pollutant	Averaging Period	Modeled Impacts		LST Criteria		Exceeds Threshold?
		µg/m³	*ppm*	*µg/m³*	*ppm*	
Residential Receptors						
NO_2	1 hour	75	0.04	224	0.12	No
CO	1 hour	148	0.13	19,340	16.9	No
CO	8 hours	61	0.05	8,319	7.3	No
PM_{10}	24 hours	6.5	—	10.4	—	No
$PM_{2.5}$	24 hours	6.1	—	10.4	—	No
Hospital Receptors						
NO_2	1 hour	557	0.30	224	0.12	Yes
CO	1 hour	1,449	1.27	19,340	17	No
CO	8 hours	586	0.51	8,319	7	No
PM_{10}	24 hours	262.8	—	10.4	—	Yes
$PM_{2.5}$	24 hours	135.2	—	10.4	—	Yes
Other Sensitive Receptors						
NO_2	1 hour	84	0.04	224	0.12	No
CO	1 hour	302	0.26	19,340	16.9	No
CO	8 hours	28	0.02	8,319	7.3	No
PM_{10}	24 hours	11.8	—	10.4	—	Yes
$PM_{2.5}$	24 hours	3.4	—	10.4	—	No

µg/m³ = micrograms per cubic meter; ppm = parts per million; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter

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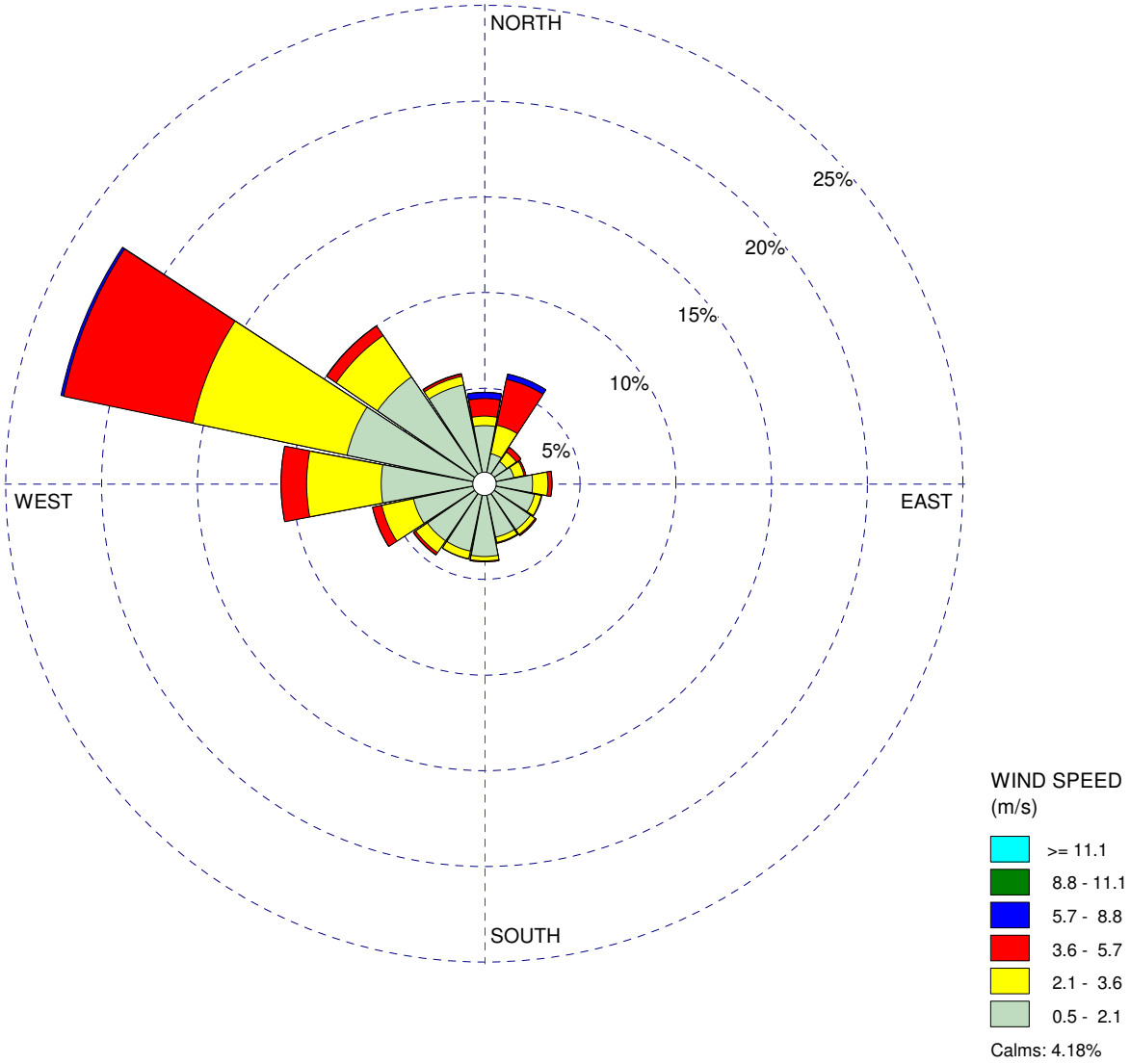
WIND ROSE PLOT:

Riverside, CA

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	Start Date: 1/1/2005 - 00:00 **End Date: 12/31/2009 - 23:00**	MODELER:	
	CALM WINDS: **4.18%**	TOTAL COUNT: **43501 hrs.**	
	AVG. WIND SPEED: **1.95 m/s**	DATE: **8/28/2013**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

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4.0 CONCLUSIONS

The LST Analysis was conducted to estimate worst-case ambient air quality impacts during construction of the project. The LST Analysis shows that maximum 1-hour NO_2 and 24-hour PM_{10} and $PM_{2.5}$ modeled concentrations would exceed the thresholds of significance established by SCAQMD at sensitive receptors in the vicinity of the project site. The 1-hour and 8-hour CO concentrations would not exceed the threshold of significance.

The impacts suggest that PM_{10} emissions could exceed the limitations in SCAQMD Rule 403, although compliance with Rule 403 would restrict visible fugitive dust emissions from leaving the construction site. Moreover, the limit would be exceeded only if (1) the amount of construction activity (e.g., demolition activity or graded area, amount and type of equipment, hours of operation) assumed in this analysis actually occurred and (2) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day. Similarly, the maximum NO_2 impacts would result if a combination of the maximum amount of construction equipment and adverse meteorological conditions associated with the highest impacts were to occur.

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APPENDIX A

Selected AERMOD Results

Riverside Community Hospital - Localized Significance Thresholds Analysis
Localized Significance Thresholds for SRA 23

Pollutant	Averaging Period	CAAQS/NAAQS		Max Conc.	LST Criteria	
		$\mu g/m^3$	ppm		$\mu g/m^3$	ppm
Nitrogen Dioxide (NO_2)	1 hour	339	0.18	0.061	224	0.12
Carbon Monoxide (CO)	1 hour	23,000	20	3.10	19,340	16.9
Carbon Monoxide (CO)	8 hours	10,000	9.0	1.73	8,319	7.3
Respirable Particulate Matter (PM_{10})	24 hours	50	—	NA	10.4	—
Fine Particulate Matter ($PM_{2.5}$)	24 hours	35	—	NA	10.4	—

Source: SCAQMD. 2008. Final Localized Significance Thresholds Methodology (Revised).

Riverside Community Hospital - Localized Significance Thresholds Analysis
Maximum Ambient Air Quality Impacts at Sensitive Receptors - Phase I

Pollutant	Averaging Period	Modeled Impacts		LST Criteria		Exceeds Threshold?
		$\mu g/m^3$	ppm	$\mu g/m^3$	ppm	
Residential						
Nitrogen Dioxide (NO_2)	1 hour	315	0.17	224	0.12	Yes
Carbon Monoxide (CO)	1 hour	1,078	0.94	19,340	16.9	No
Carbon Monoxide (CO)	8 hours	135	0.12	8,319	7.3	No
Respirable Particulate Matter (PM_{10})	24 hours	24.1	—	10.4	—	Yes
Fine Particulate Matter ($PM_{2.5}$)	24 hours	13.7	—	10.4	—	Yes
Hospital						
Nitrogen Dioxide (NO_2)	1 hour	1,430	0.76	224	0.12	Yes
Carbon Monoxide (CO)	1 hour	2,008	1.75	19,340	16.9	No
Carbon Monoxide (CO)	8 hours	807	0.71	8,319	7.3	No
Respirable Particulate Matter (PM_{10})	24 hours	242.3	—	10.4	—	Yes
Fine Particulate Matter ($PM_{2.5}$)	24 hours	130.8	—	10.4	—	Yes
Other Sensitive Receptors						
Nitrogen Dioxide (NO_2)	1 hour	519	0.28	224	0.12	Yes
Carbon Monoxide (CO)	1 hour	1,251	1.09	19,340	16.9	No
Carbon Monoxide (CO)	8 hours	175	0.15	8,319	7.3	No
Respirable Particulate Matter (PM_{10})	24 hours	45.5	—	10.4	—	Yes
Fine Particulate Matter ($PM_{2.5}$)	24 hours	24.7	—	10.4	—	Yes

Riverside Community Hospital - Localized Significance Thresholds Analysis
Maximum Ambient Air Quality Impacts at Sensitive Receptors - Phase Iib

Pollutant	Averaging Period	Modeled Impacts		LST Criteria		Exceeds Threshold?
		$\mu g/m^3$	ppm	$\mu g/m^3$	ppm	
Residential						
Nitrogen Dioxide (NO_2)	1 hour	212	0.11	224	0.12	No
Carbon Monoxide (CO)	1 hour	856	0.75	19,340	16.9	No
Carbon Monoxide (CO)	8 hours	107	0.09	8,319	7.3	No
Respirable Particulate Matter (PM_{10})	24 hours	22.2	—	10.4	—	Yes
Fine Particulate Matter ($PM_{2.5}$)	24 hours	11.5	—	10.4	—	Yes
Hospital						
Nitrogen Dioxide (NO_2)	1 hour	718	0.38	224	0.12	Yes
Carbon Monoxide (CO)	1 hour	2,296	2.01	19,340	17	No
Carbon Monoxide (CO)	8 hours	899	0.79	8,319	7	No
Respirable Particulate Matter (PM_{10})	24 hours	325.8	—	10.4	—	Yes
Fine Particulate Matter ($PM_{2.5}$)	24 hours	168.5	—	10.4	—	Yes
Other Sensitive Receptors						
Nitrogen Dioxide (NO_2)	1 hour	188	0.10	224	0.12	No
Carbon Monoxide (CO)	1 hour	1,216	1.06	19,340	16.9	No
Carbon Monoxide (CO)	8 hours	152	0.13	8,319	7.3	No
Respirable Particulate Matter (PM_{10})	24 hours	42.8	—	10.4	—	Yes
Fine Particulate Matter ($PM_{2.5}$)	24 hours	22.1	—	10.4	—	Yes

APPENDIX C

Biological Technical Memorandum

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MEMORANDUM

To: Stephanie Standerfer
From: Linda Archer
Subject: Riverside Community Hospital Expansion Project, Biological Survey
Date: July 11 2013
Attachment(s): Figure 1: Study Area, Attachment A: Photo Log

This memorandum is provided to document the biological resources present at the proposed Riverside Community Hospital Expansion Project (project) site and a 500-foot buffer (study area), and provide recommendations for avoidance of impacts to resources, if present.

PROJECT LOCATION

The approximately 22.5-acre project site is located at 4445 Magnolia Avenue Riverside, California, approximately 0.42 miles west of State Route 91 (SR-91) and approximately 1.60 miles south of SR-60 in the City of Riverside. The site is bounded by 14th Street to the north, Brockton Avenue to the west, Magnolia Avenue to the east, and Tequesquite Avenue to the south (Figure 1). The site is mapped as Township 2 South, Range 5 West, Section 27 on the U.S. Geological Survey (USGS) 7.5-minute Riverside West quadrangle map (USGS 1967).

METHODS

A literature review was conducted to evaluate the environmental setting of the study area and identify potential special-status biological resources that may be found on the site. The review included the Riverside West 7.5-minute USGS quadrangle, the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, and the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Dudek biologist Ryan Gilmore conducted a site visit on May 10, 2013, between 9:00 a.m. and 10:30 a.m. During the site visit, temperatures ranged from 69–75 degrees Fahrenheit, winds ranged from 1–3 miles per hour, skies were clear, and visibility was good. The site visit focused on habitat assessments for special-status species and the potential for jurisdictional waters.

The project and a 500-foot buffer (study area) was evaluated for the presence, absence, or likelihood of occurrence of special-status species and vegetation types as well as more general

biological resource issues that could pose a constraint to the project through applicable laws and regulations. Focused surveys for plants or wildlife were not performed during the site visit. Special-status parameters for wildlife included connectivity to documented and potentially occurring habitat, hydrology, access to the site, foraging and nesting habitat, the site's operational activities, and the life history needs of each species.

All plant and wildlife species detected during the site visit were recorded in field notes. Plants were detected and identified through direct sight. Plants were identified to the species level based on previous experience with the species or through the use of the Jepson Manual, Vascular Plants of California (Baldwin et al. 2012).

ENVIRONMENTAL SETTING

The project site is located within the City of Riverside and is surrounded by urban developed land uses. Surrounding land uses include the Riverside Community Hospital, commercial developments, residential developments, the Calvary Presbyterian Church, and urban park space. Refer to Attachment A for representative photographs of the study area.

Topographically, the study area is mostly flat, but is separated by two minor escarpment topographical features. The elevation within the study area ranges from 780–830 feet above mean sea level. On the Riverside West 7.5-minute USGS quadrangle an intermittent stream (i.e., "blue line") crosses into the middle portion of the study area (USGS 1967).

Several soil types are mapped within the study area. Soil phases within the study area include Arlington fine sandy loam, Arlington loam, Chino silt loam, Hanford coarse sandy loam, and Terrace escarpments (NRCS 2013). However, soils within the study area are compacted throughout and urbanized.

RESULTS

The study area contains urban park space, ornamental landscaping, and disturbed land (ruderal) land covers. Refer to Attachment A for representative photographs of the land covers as observed within the study area.

Developed areas dominate the study area and include impervious surfaces and ornamental landscaping. Within the study area, developed areas consist of roadways, sidewalks, driveways and parking areas, loading docks, retail businesses, residences, churches, medical facilities, and urban park space.

Ornamental vegetation is present within the majority of the study area. Ornamental plant species observed to be common within the study area include, though not limited to: Italian cypress (*Cupressus sempervirens*), lemon-scented gum tree (*Eucalyptus citriodora*), fig tree (*Ficus microcarpa*), jacaranda (*Jacaranda mimosifolia*), crape myrtle (*Lagerstroemia indica*), white mulberry (*Morus alba*), Canary Island date palm (*Phoenix canariensis*), Canary Island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Italian stone pine (*Pinus pinea*), fern pine (*Podocarpus gracilior*), Peruvian pepper-tree (*Schinus molle*), Mexican fan palm (*Washingtonia robusta*), and turf grasses.

Disturbed land (ruderal) includes dirt areas (e.g., abandoned parkways, side lots) that have been or are currently subject to intensive disturbance; these areas preclude any natural community. Plant species occurring in disturbed areas are typically opportunistic, invasive species. Such species are adapted to rapid colonization of soils that have been recently exposed or compacted, amended, or otherwise greatly altered. Open areas in the study area exhibit fairly high to very high degrees of past disturbance. The most extensive disturbed land area within the study area (outside the project site) is a vacant lot on the northwestern corner of Brockton Avenue and Tequesquite Avenue; these areas are largely bare dirt or overgrown. Plant species found in these areas of the study area include a moderate variety of disturbance-adapted species, such as wild oat (*Avena fatua*), common horseweed (*Conyza canadensis*), telegraph weed (*Heterotheca grandiflora*), prickly lettuce (*Lactuca serriola*), cheeseweed (*Malva parviflora*), tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), Russian-thistle (*Salsola tragus*), and common sow thistle (*Sonchus oleraceus*).

Overall wildlife abundance and species richness appear to be low because of the urbanized nature of the study area. However, 12 species of birds were observed during the site visit. These include: mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), western kingbird (*Tyrannus verticalis*), northern mockingbird (*Mimus polyglottos*), white throated swift (*Aeronautes saxatalis*), red-tailed hawk (*Buteo jamaicensis*), lesser goldfinch (*Carduelis pinus*), Anna's hummingbird (*Calypte anna*), and European starling (*Sturnus vulgaris*). No nests or nesting behavior was observed during the survey; however, a focused nesting bird survey was not conducted and any of these, and other common species, could nest within the project site. Two mammal species were observed during the site visit: California ground squirrel (*Osteospermophilus beecheyi*) and domestic cat (*Felis catus*). All of these are common, widespread species and strongly adapted to human-altered landscapes with intensive use.

A trapezoidal channel with concrete bottom, approximately 10 feet wide at the top of the banks, was observed east of Magnolia Avenue within the study area, but not within the project

site. The channel undergrounds at Magnolia Avenue and does not daylight within the study area. The location of the channel corresponds to the location of broken blue-line stream observed on the Riverside West 7.5-minute USGS quadrangle. Refer to Attachment A for a representational photograph of the channel as observed within the study area.

MSHCP

The study area is located within the Cities of Riverside/Norco Area Plan of the MSHCP. The study area is not within any MSHCP criteria cells (MSHCP 2013). The study area is approximately 2,000 feet east of the Criteria Cell 443, which is a part of Existing Core A of the MSHCP. The MSHCP establishes habitat assessment requirements for certain plant, bird, mammal, and amphibian species. The study area is not within any additional survey areas as defined in section 6.3.2 of the MSHCP or within any Narrow Endemic Plant Species survey areas as defined in section 6.1.3 of the MSHCP; therefore, the project is not subject to any habitat assessment or survey requirements. There are no riparian/riverine or vernal pool habitats present within the study area; therefore, there are no requirements for the project pursuant to section 6.1.2 - Riparian/Riverine and Vernal Pools Guidelines of the MSHCP. The study area is not adjacent to any conservation areas; therefore, there are no requirements pursuant to section 6.1.4 – Urban Wildlands/Interface Guidelines of the MSHCP.

CONCLUSION

Ornamental landscaping, including mature trees, throughout the study area has the potential to provide nesting habitat for birds. Common native urban bird species that may nest in ornamental landscaping include lesser goldfinch, Brewer's blackbird (*Euphagus cyanocephalus*), northern mockingbird, common raven, American crow, Anna's hummingbird, house finch (*Carpodacus mexicanus*), and hooded oriole (*Icterus cucullatus*). In addition, there is reasonable potential for buildings to support nesting opportunities for native birds that are common in urbanized areas, such as American kestrel (*Falco sparverius*), house finch, black phoebe (*Sayornis nigricans*), cliff swallow (*Petrochelidon pyrrhonota*), northern rough-winged swallow (*Stelgidopteryx serripennis*), and white-throated swift (*Aeronautes saxatalis*). A few species, primarily killdeer (*Charadrius vociferus*), may choose to nest on bare ground within the study area.

In order to avoid potential impacts to nesting birds in conformance with the Migratory Bird Treaty Act, a qualified biologist will conduct a nesting bird survey within 1 week of ground disturbance activities. The survey shall consist of full coverage of the proposed project footprint and a 300-foot buffer. If no active nests are found, no additional measures are required. If nests are found, the nest locations shall be mapped by the biologist utilizing GPS equipment. The nesting bird species will be documented and, to the degree feasible, the nesting stage (e.g.,

incubation of eggs, feeding of young, near fledging). The biologist shall establish a no-disturbance buffer around each active nest. The buffer will be determined by the biologist based on the species present and surrounding habitat. No construction or ground disturbance activities shall be conducted within the buffer until the biologist has determined the nest is no longer active and has informed the construction supervisor that activities may resume.

There is an existing open concrete flood control channel east of Magnolia off the project site boundaries. The open channel portion of this feature could be considered jurisdictional. However, the open channel converts to an underground 12-foot by 7-foot box on the west side of Magnolia Avenue and abuts the project boundary. The project will not directly or indirectly affect the conveyance aspect of this storm drain. Currently the hospital storm drains do connect and discharge to this facility, and the proposed project will not modify this existing condition. It is assumed that all construction activities would be limited to the west of Magnolia Avenue; will not affect the open channel or the underground box facility; therefore, no direct and indirect impacts to jurisdictional waters would occur as a result of the project.

Based on our review of biological resources in the study area, with implementation of the recommended nesting bird avoidance measure, no significant impacts to biological resources would occur as a result of the project.

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DUDEK

7824-01

MAY 2013

SOURCE: Kimley-Horn and Associates 5/20/2013, Perkins+Will 5/20/2013, BING 2013

RIVERSIDE COMMUNITY HOSPITAL PROJECT

FIGURE 1

Study Area

Path: Z:\Projects\7824\01\MAPDOC\MAPS\Figure1_StudyArea.mxd

DUDEK PHOTO DOCUMENTATION

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Project: Riverside Community Hospital Expansion Project

Date: May 10, 2013

Notes: Representative Photographs of Existing Environmental Setting

Construction at APN 217-300-014 facing east.

Potential nesting bird habitat and ornamental vegetation at APN 217-300-015 facing south.

Terrace escarpment at APN 217-300-014 facing northeast.

Overview of Riverside Community Hospital, APN 217-070-027, facing south.

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PHOTO DOCUMENTATION

Channel located east of Magnolia Avenue facing east.

Disturbed land (ruderal) vacant lot located on corner of Brockton Avenue and Tequesquite Avenue facing west.

Overview of Riverside Community Hospital, APN 217-070-027, facing north from terrace escarpment.

Overview of Tequesquite Avenue as it enters APN 217-300-015 facing east.

APPENDIX D

Cultural/Historic Resources Report

Cultural Resources Survey and Evaluation
Riverside Community Hospital Specific Plan
4445 Magnolia Avenue

Volume One - Report and Recommendations

Revised Final Report
August 20, 2013

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Cultural Resources Survey and Evaluation
Riverside Community Hospital Specific Plan

4445 Magnolia Avenue, Riverside, CA
Volume One - Report and Recommendations

REVISED FINAL REPORT
AUGUST 20, 2013

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Executive Summary

This cultural resources survey and evaluation was prepared by Wilkman Historical Services (WHS) as a component of a new specific plan for the hospital property. Its purpose is to identify existing and potential cultural resources, to determine any impacts from the proposed specific plan, and to develop mitigation measures to reduce any negative impacts to a level of less than significant in accordance with the California Environmental Quality Act (CEQA). The report addresses land currently owned by Riverside Community Hospital as well as land adjacent to hospital owned land. The report also identifies known cultural resources across public rights-of-way from the existing hospital property. The following is a summary of the resources, impacts, and recommended mitigation measures.

Cultural Resources and Identified Impacts

a. J. Harrison Wright Palm Grove

This report determined that the palm grove at the southwest corner of Magnolia Avenue and Fourteenth Street qualifies for City of Riverside Cultural Heritage Landmark status as a cultural landscape. The palms in the grove were donated to the hospital by renowned palm tree authority and Riverside resident J. Harrison Wright and were clustered at the corner to balance with the historic palm grove in Newman Park across Magnolia Avenue.

The main concern in regard to this resource is its relationship to the proposed multi-story building and parking area proposed for the site of Building A. Building A, while not a historic resource, provides an important sense of setting for the palm grove and it is important that any future building in that area be respectful of the historic relationship between building and landscaping in that area.

b. Building B

Building B is situated in roughly the center of the upper hospital campus near Magnolia Avenue, and it currently serves as the hospital's main bed tower. WHS found this building to be eligible for listing in the California Register of Historical Resources. Building B is an excellent example of Mid-Century Modern architecture by a renowned local architect, Herman O. Ruhnau. To bring Building B into compliance with current seismic standards, alterations will be necessary that may impact character defining features. It will be important to design any such alterations to preserve as much as possible the architectural integrity of the building.

c. Chinatown Site

The Chinatown site, located at the northwest corner of Brockton and Tequesquite Avenues is a City of Riverside Cultural Heritage Landmark and it is eligible for

listing in the National Register of Historic Places. The Chinatown site is significant for its potential to yield information important to the history of Chinese immigrants in Riverside.

While there is no direct evidence of Chinatown-related uses of the hospital property, the location of Chinatown across Brockton Avenue from the hospital site leaves open the possibility that evidence of Chinatown's history my lie below the ground on the hospital site. This concern was raised in the cultural resources report related to the Building O medical offices structure and the Building P Parking structure now under construction. (WHS 2013) To address the potential of archaeological evidence below the ground on the hospital site, the grading of this site is now being monitored by a qualified archaeologist.

d. Riverside Community Players

The Riverside Community Players, situated at 4026 Fourteenth Street, toward the northwest corner of the hospital site, qualifies for local designation as a Structure of Merit. While the architectural integrity of the existing building on the site has been compromised by later additions, the Players is among the longest continuous operating theater groups in the USA.

Immediately south of the Community Players building, the hospital proposes to build a seven-story Hospital Tower. The most significant potential adverse impact from the Hospital Tower would be the loss of parking in near proximity to the theater. Presently, an abundance of surface parking south of the theater directly serves theater patrons. An agreement between the Community Players and the Community Hospital requires that "...at least at least 150 parking spaces remain within the Hospital Tract or alternative real property with at least 100 of such spaces located within 300 feet of the Players Tract..." Once ground is broken for the new Hospital Tower, parking now being used by theater patrons will no longer be available. Many of the theater patrons are elderly and continued patronage of the theater by these people is dependent upon convenient, easily accessible parking.

Another impact from the proposed hospital tower is its seven-story height relative to the one- to two-story height of the theater. Mitigating this to some degree is the two-step design of the building, placing a lower element closer to the theater, with the tower itself located about 30 feet back from the lower element. As such, the tallest part of the Hospital Tower is proposed to be about 90-feet from the Community Players building. Nonetheless, the significant difference between the heights of the two buildings will be an impact that will need to be mititated.

e. Calvary Presbyterian Church

Calvary Presbyterian Church, situated along Magnolia Avenue south of the hospital campus, qualifies for listing on the National Register of Historic Places and it is a designated City of Riverside Structure of Merit. Its significance relates mainly to its Gothic Revival architecture which rivals any other example in Riverside.

The improvement most likely to have an impact on Calvary Presbyterian Church is the two phase future bed tower building in the area now occupied by the Buildings I and J parking structures. It will be important that the scale and materials used on this building be sensitive to the church and that perimeter site improvements and landscaping complement soften the view from the church toward the building.

f. Grant School, 4011 Fourteenth Street

Located at the northeast corner of Brockton Avenue and Fourteenth Street, Grant School is a City of Riverside Cultural Heritage Landmark and is eligible for listing in the National Register of Historic Places. Its significance relates to its architecture and its association with prominent architect G. Stanley Wilson.

Grant school is located accross Fourteenth Street from the hospital property and none of the improvements currently being proposed appear capable of causing an adverse impact to this cultural resource. Should any substantial improvements be proposed along Fourteenth Street across from Grant School, however, potential adverse impacts will need to be addressed.

g. Newman Park

Situated at the southeast corner of Magnolia Avenue and Fourteenth Street, Newman Park is a City of Riverside Cultural Heritage Landmark. The park's significance derives from its palm grove, donated by renowned palm authority and Riverside J. Harrison Wright and its art deco style monument to Juan Bautista de Anza.

Newman Park could be impacted by the proposed multi-story building in the area of Building A at the northeast corner of the hospital property. Important in this regard, is the relationship between the J. Harrison Wright palm grove in Newman Park and the J. Harrison Wright palm grove at the northeast corner of the hospital site. An important aspect of the Newman Park palm grove is the balance achieved between it and the J. Harrison Wright palm grove on the hospital property. Also important is the scale of building improvements at that corner. Mitigation measures and recommendations intended to protect the J. Harrison Wright palm grove on the hospital property will also serve to protect the grove in Newman Park.

h. Old Magnolia Avenue Trolley Line and Refuse Dump

Located in the vicinity of Magnolia Avenue and Fourteenth Street, the Old Magnolia Avenue Trolley Line and Refuse Dump qualifies for historic resource status for its archaeological potential. Test explorations of the site have uncovered many artifacts from Riverside's early history, deposited when the area was a local town dump.

There is a relatively close proximity between this archaeological site and the multi-story building proposed for the southwest corner of Magnolia Avenue and Fourteenth Street. Undiscovered subsurface cultural resources related to the Old Magnolia Avenue Trolley Line and Refuse Dump may exist in this area.

Recommended Mitigation Measures

The following mitigation measures will reduce the impacts to cultural resources to level of less than significant. Implementation specifics will be subject to review and approval of the Planning Division staff and/or Cultural Heritage Board in accordance with Title 20 of the Riverside Municipal Code:

a. J. Harrison Wright Palm Grove

1. Establish a landscape setback that preserves, to the largest extent possible the trees in the J. Harrison Wright Palm Grove, with the frontage of the landscape setback to extend from the east frontage of Building H to the parking lot at the southwest corner of Magnolia Avenue and Fourteenth Street. If necessary for the efficiency of the design of the building that replaces Building A, a small number of palms may be relocated within the defined setback area.
2. The building that replaces Building A should be of contemporary design, but should be sensitive in design, color, and materials to the landscaped setback. If the building has a direct frontage on the palm grove landscaped setback, design the building to step down to one story at the edge of the palm grove, with a design that provides a compatible backdrop for the historic landscape.
3. Design the site plan for the building that replaces Building A so it has a building edge or building-like edge adjacent to the palm grove. A building-like edge could consist of an arcade type structure similar in concept to that used along the Market Street frontage of the shopping center on the west side of Market Street, between Third and Fourth Streets. If such an arcade-like feature is used, it should be of an architectural style in keeping with the building behind it.
4. Design and install a plaque and interpretive feature with prominent public access in the palm grove, telling the history of J. Harrison Wright and his association with the landscaping of the hospital and Newman Park.

b. Building B

1. To the largest extent possible, maintain the architectural integrity of Building B by preserving its character defining features. If replacement of character defining features becomes necessary, the replacements should maintain the appearance of the original materials.
2. To the extent feasible, locate seismic reinforcement within the interior of the building. To the extent that seismic reinforcement needs to be

accomplished on the exterior of the building, design it to blend as much as possible with the existing building. For example any seismic wrap necessary on the building should protrude from the building face as little as possible and should be similar in color and texture to the existing building.

3. Maintain the lacy look provided by the Lemon Scented Gum Eucalyptus trees south of Building B through preservation or relocation of existing trees or through the replacement of existing trees with specimen trees of the same variety.
4. Preserve all rock walls and seating areas associated with Building B's landscape. If new improvements necessitate the removal of some rock walls, build replacement walls having the same appearance as the original walls.

c. Chinatown Site

1. Follow the recommendations in the report prepared by the archaeologist monitoring the grading associated with Buildings O and P.

d. Riverside Community Players

1. Before ground is broken for the new Hospital Tower, provide improved parking for Community Players theater patrons in accordance with the agreement between the Riverside Community Hospital and Riverside Community Players. Many of the theater patrons are elderly, so such parking needs to be located as much as possible near the theater and at the same general grade as the theater.
2. If possible, pave and stripe the area below Building G to provide added parking near the theater.
3. Develop with the theater management, a means for assuring access to convenient parking when performances are scheduled.
4. Narrow the planter areas shown on the plot plan east and west of the parking bay along the north face of the Hospital Tower and use the space gained to create four or five finger planters to break up the expanse of parking. In these planters, specify a tree variety that will help soften the view to the lower part of the building.

e. Calvary Presbyterian Church.

1. Adhere to the following design guidelines in regard to the design of the Phase II Bed Tower:
   a. The building should be a contemporary design, but be sensitive to the adjacent church in the placement of height, massing, landscaping, and in the use of materials.
   b. Design the building to step up in height, beginning with lower

elements at the south and east elevations, progressing to higher elements toward the north and west.

c. Refrain from the extensive use of highly reflective building materials in lower parts of the building.

d. Use shading devices similar in concept to those used on Building B so as to soften the view to windows and provide a sense of depth to the building.

e. Design the landscaping around the south and east sides of the building to create a landscape filter at both the lower and higher elevations. The type of trees used in the parking lot for Building B is a good example of the type of landscaping that would effectively soften the view to the Phase II Bed Tower.

f. Grant School

1. There is no need for mitigation measures relating to Grant School at this time. However, should any improvements be proposed along Fourteenth Street across from Grant School, these should be designed so as to be sensitive to the setbacks and nature of improvements on the Grant School property.

g. Newman Park

1. The mitigation measures listed in relation to the J. Harrison Wright palm grove apply equally to Newman Park.

h. Old Magnolia Avenue Trolley Line and Refuse Dump

1. Engage the services of an archaeologist who meets Secretary of Interior Professional Qualifications to monitor any on-site grading in the vicinity of Fourteenth Street and Magnolia Avenue.

i. Overall Project

1. In a prominent public place, develop an interpretive feature telling the story of Riverside Community Hospital. This history should include the use of the property for farming, athletic fields, and its ultimate development as a major medical center.

1. Purpose of Report

In May of 2013, Riverside Community Hospital engaged the services of Wilkman Historical Services (WHS) to conduct a survey of the hospital property to identify and evaluate potential cultural resources . In addition to the hospital property itself, WHS also evaluated resources immediately adjacent to the hospital property, including Calvary Presbyterian Church at 4495 Magnolia Avenue, the Community Players building at 4026 Fourteenth Street, the Community Medical Building at 4440 Brockton Avenue, and the Brockton Auto Clinic at 4468 Brockton Avenue. WHS also examined existing cultural resources across from the hospital property, including Chinatown, Grant School, and Newman Park. WHS engaged the services of Virginia Austerman, MA, RPA to examine the hospital property for potential archaeological resources.

To complete an evaluation of the significance of these properties, WHS conducted sufficient research to establish the basic histories of the properties and to document their significance. Records researched included those on file at the City of Riverside Planning Department, City of Riverside Local History Resource Center, Riverside Metropolitan Museum, Los Angeles Public Library, County of Riverside Assessor, and various Internet web sites.

This report was prepared in compliance with the City of Riverside's environmental review process, the California Environmental Quality Act (CEQA, PRC2100 et seq), and the Cultural Resources Ordinance of the City of Riverside Municipal Code (Title 20, Ordinance 6263, 1996) as amended.

2. Summary of Project

Riverside Community Hospital currently provides 372 beds and operates on a 17.5-acre property situated between Fourteenth Street, Brockton Avenue, Magnolia Avenue, and the southerly edge of the Tequesquite Arroyo. (Figures 1, 2, and 3) The Hospital currently operates under a Conditional Use Permit dating back to the 1960s and the Downtown Specific Plan, adopted in 2003. The hospital has now decided to develop a new Specific Plan, tailored to the hospital's unique needs for growth and expansion. Once adopted,

FIGURE 1: LOCATION IN THE REGION

SOURCE: UNITED STATES GEOLOGICAL SURVEY

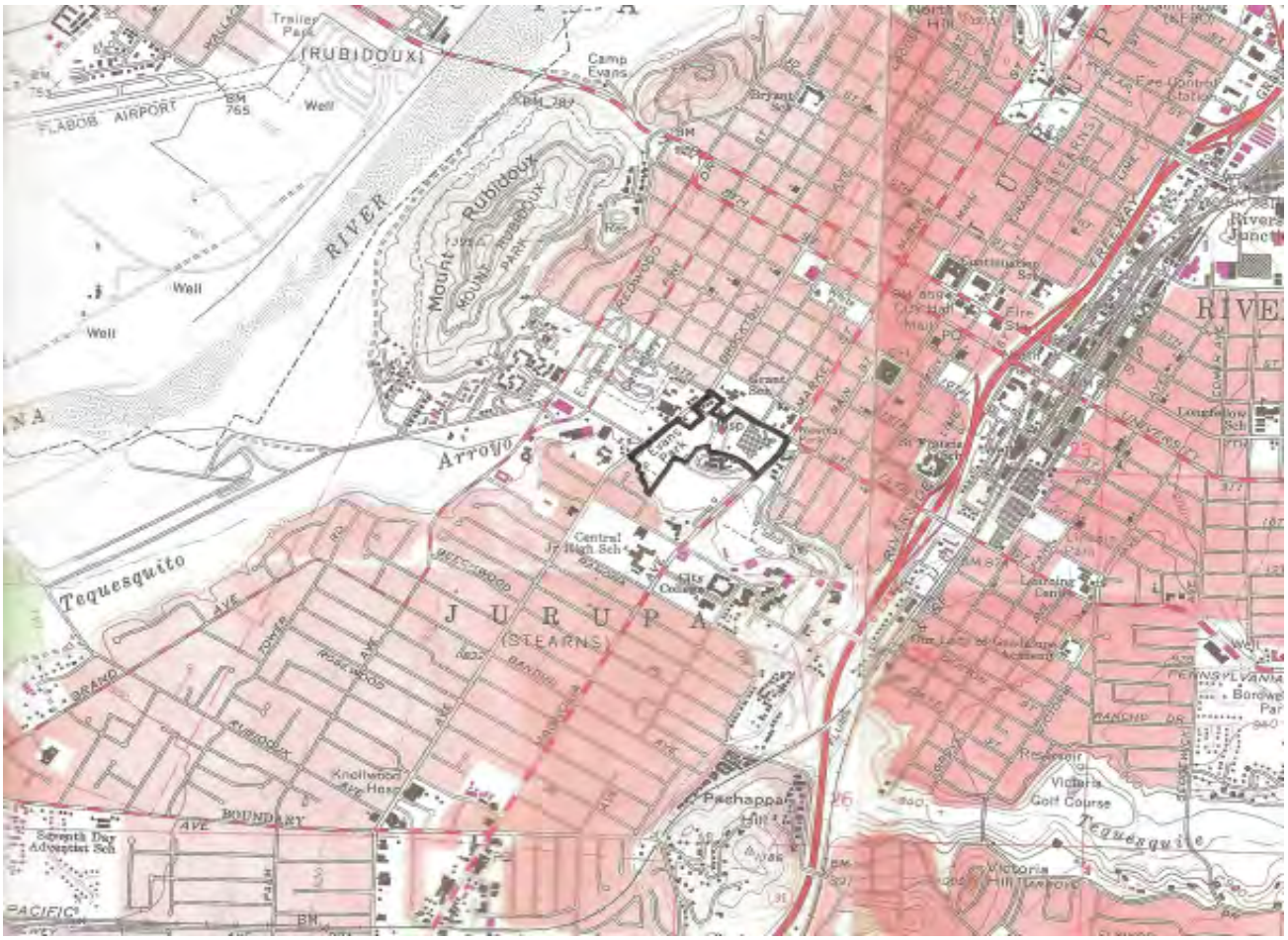


FIGURE 2: LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

the new Riverside Community Hospital Specific Plan will supersede both the Conditional Use Permit and the Downtown Specific Plan as they pertain to the hospital property.

a. Existing Hospital Campus

The existing hospital complex (Figure 4) is composed of 17 buildings, built between 1925 and 2013. The following is a summary of the existing buildings:

Building A: The original single-story (with basement) hospital building completed in1925 in the northeast corner of the site. .

Building B: Completed in 1966, this 6-story, 325-bed building, situated immediately west of Building A, was the third hospital component to be built.

FIGURE 3: LOCATION IN THE NEIGHBORHOOD AND SPECIFIC PLAN BOUNDARIES

SOURCE: CITY OF RIVERSIDE GIS SYSTEM

Building C: Completed in 1988, this 4-story building is located immediately west of Building B and houses 34 intensive care beds, pre- and post-operative care units, surgical suites, the emergency hospital, and a supply center.

Building D: A 3-story building built northwest of Building A in 1958, it was the second bed tower to be built on the site.

Building E: Building E is an infill module between Buildings D and B that is currently used for outpatient surgery and radiology.

Building F: Completed in 1997, Building F houses emergency generators.

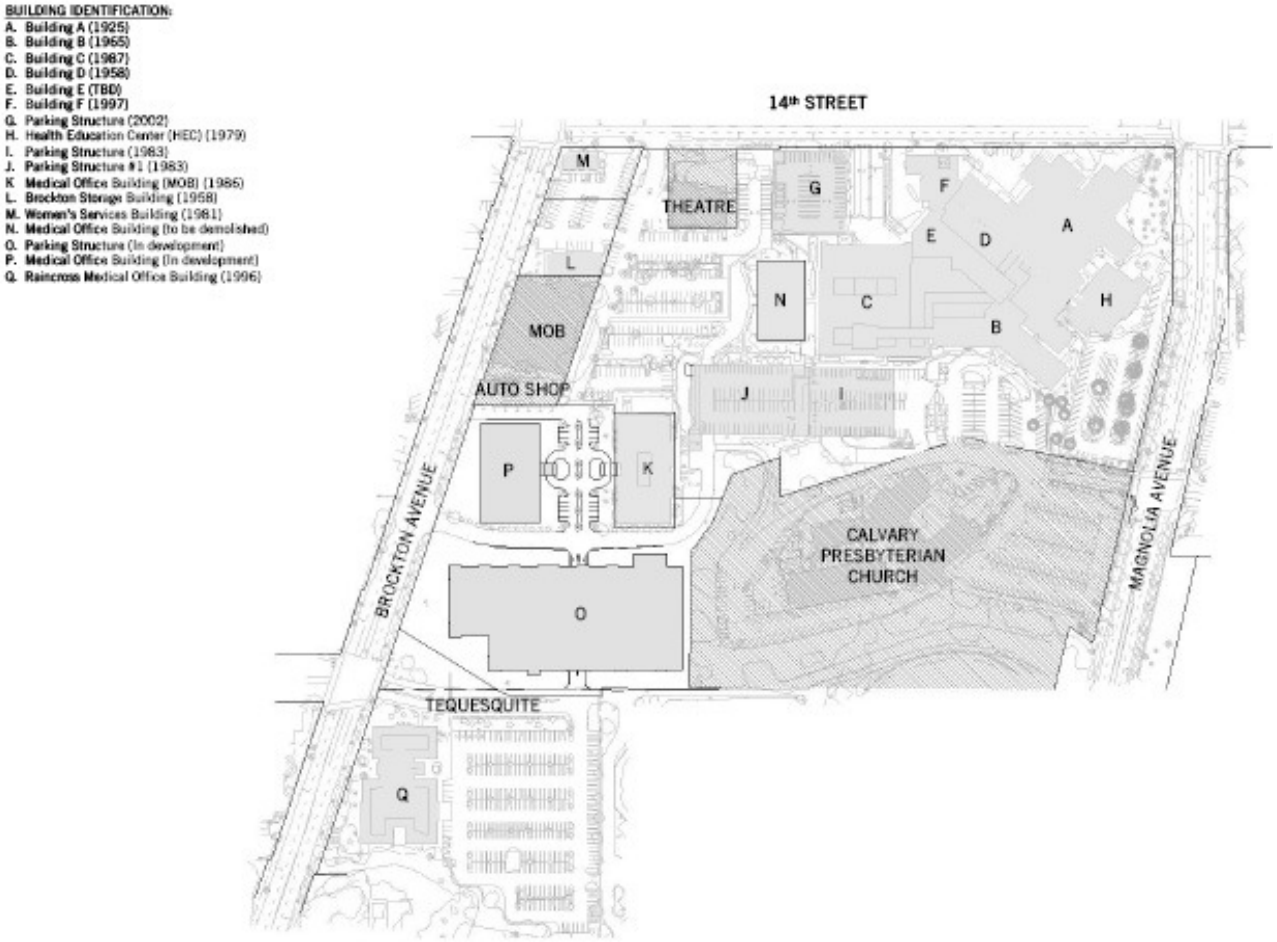


FIGURE 4: HOSPITAL CAMPUS BUILDINGS

SOURCE: PERKINS + WILL ARCHITECTS

Building G: This two-level parking structure was built in 2002 and is equipped with a landing pad to accept patients by helicopter.

Building H: This single story, building serves as the hospital's Health and Education building.

Building I: This four-level parking structure was built in 1983 to augment parking for the upper hospital campus.

Building J: This four-level parking structure was built in 1986 and forms an extension of Building I with primary access from the lower hospital campus.

Building K: This 3-story building was originally constructed in 1986 and remodeled and expanded in 2003. It houses doctor's offices and cancer treatment facilities.

Building L: Built as a retail building in 1958, this single-story structure is now used for hospital storage.

Building M: Originally built as a retail store in 1981, this single-story building is now occupied by Women's Services.

Building N: This five-story office building was built in 1975. Located west of Building C, it provides doctor's offices and pharmacy services.

Building O: Located northeast of Brockton and Tequesquite Avenues, this five level parking structure was under construction at the writing of this report.

Building P: Also located northeast of Brockton and Tequesquite Avenues, this three-story medical office building was also under construction at the writing of this report.

Building Q: This three-story building was completed in 1996 to provide doctor's offices, a pharmacy, and urgent care services.

b. Near-Term Construction Plans

The Hospital Specific Plan will address development over a 30-year period. The plan will also provide for compliance with Senate Bill 1953, a state law that sets basic hospital seismic safety standards. Two construction phases (Figure 5) are presently anticipated as follows:

Phase One: This phase centers on the construction of a new 7-story hospital building that will be built where "Building N" and some adjacent surface parking are now located. The building is currently funded for 105 beds, with plans to expand it to 189 beds. At build-out the total number of beds in the hospital campus would be 562.

Phase Two: This phase includes the construction of several new structures to address hospital services and provide additional beds taking the total to approximately 600. To accomplish this, the following activities are anticipated:

- Building A in the northeast corner of the site is proposed to be demolished and replaced by parking and a new clinical or medical office building.
- Additional surface parking is proposed to be added as needed.
- A new bed tower is proposed to be built in a central location at the south end of the site. Its construction is anticipated to be broken into two elements.

c. Additional Uses to be Accommodated by the Specific Plan

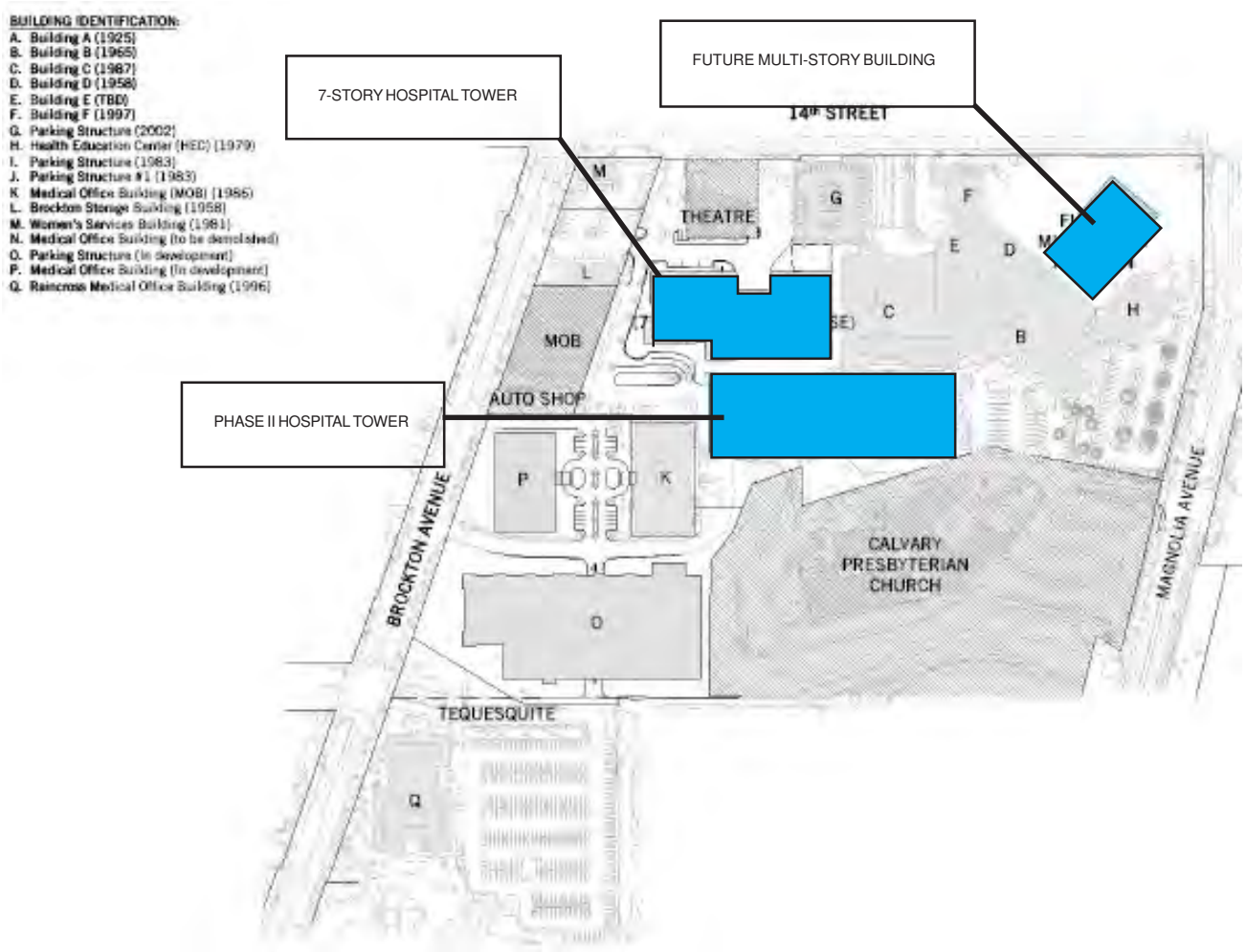


FIGURE 5: NEAR TERM CONSTRUCTION PLANS

SOURCE: PERKINS + WILL ARCHITECTS

The Riverside Community Hospital Specific Plan is anticipated to allow for a number of future uses to be housed in existing or future buildings yet to be determined. These uses include acute care, utilities, medical office buildings & clinics, helicopter landing facilities, outpatient service buildings, education centers, dental clinics, imaging centers, pharmacies, wellness centers, physical therapy or rehabilitation centers, community centers, optometry services, retail medical supplies sales, parking (including parking structures and lots), hotel facilities, and other potential uses that might support the hospital campus now or in the future.

3. Environmental Setting

The information in this section was extracted from an archaeological report prepared by Virginia Austerman, MA, RPA in support of this report. Ms. Austerman's complete report is included as Appendix B of this report.

The study area is in Riverside County within the Santa Ana River watershed. The natural topography of the overall area is valley lowland intersected by rolling hills and surrounded by mountain ranges. Elevations in this area range from 680 to 1,900 feet above mean sea level (MSL). Most of the study area has been developed or disturbed, and the only remaining large areas of native habitats occur along the Santa Ana River and in the Jurupa Mountains. Mt. Rubidoux is within one mile of the Project, on the east side of the Santa Ana River.

a. Climate

The climate of the Santa Ana River valley is classified as Mediterranean, with hot, dry summers and cool, wet winters. Average annual precipitation ranges from 12 inches per year in the coastal plain to 40 inches per year in the San Bernardino Mountains to the north. (Beck and Haas 1974)

b. Geology

The entire study area is within the north central Peninsular Ranges Geomorphic Province of California. This geomorphic province is characterized by a series of mountain ranges separated by northwest trending valleys, sub-parallel to branching faults from the San Andreas Fault. (CGS California Geological Survey 2002) The Peninsular Ranges Province extends 900 miles from the Transverse Ranges to the north southward to the tip of Baja California (Norris and Webb 1990). The project area sits on older Pleistocene alluvium (Qof) that covers Cretaceous granitic rocks. The soil appeared to be a medium brown silty loam; ground surface visibility was zero in many areas due to the paving and buildings.

c. Hydrology

The Santa Ana River is less than one mile west of the Project. This river is the largest stream system in southern California, extending from its headwaters in the San Bernardino Mountains over 100 miles southwest to the Pacific. Spring Brook, less than one mile north of the Project, is located north of Mt. Rubidoux. Winter and spring floods commonly result from storms during wet years. Before European American settlement, the Santa Ana River was a perennial stream flowing from the San Bernardino and San Gabriel mountains to the Pacific Ocean. Many springs, marshes, swamps, and bogs were interspersed throughout the watershed.

d. Biology

At an elevation of approximately 800 feet above mean sea level (AMSL), the Project falls into the Lower Sonoran Life Zone (Bean 1977), which ranges from below sea level to an elevation of approximately 3,500 feet AMSL and is representative of the Mojave and Colorado Deserts. Plants common to the area include cacti, desert agave, cheesebush, catclaw, acacia, and seasonal grasses. Animals commonly found in the area include deer, coyote, foxes, rabbits, rodents, ravens, raptors, reptiles and insects.

The Project area is currently largely covered with asphalt, buildings, and ornamental landscaping.

4. Cultural Context

The information in this section was extracted from an archaeological report prepared by Virginia Austerman, MA, RPA in support of this report. Ms. Austerman's complete report is included as Appendix B of this report.

a. Prehistory

Of the many chronological sequences proposed for southern California, the archaeological literature typically uses two primary regional syntheses. In 1955, Wallace advanced a chronology that defined four cultural horizons, each with characteristics reflecting local variations: Early Man horizon, Milling Stone, Intermediate, and Late Prehistoric. In 1986, Warren offered a chronology based on a more ecological approach which defined five periods in southern California prehistory: Lake Mojave, Pinto, Gypsum, Saratoga Springs, and Protohistoric. Warren viewed cultural continuity and change in terms of various significant environmental shifts, defining the cultural ecological approach for archaeological research of the California deserts and coasts. Many changes in settlement patterns and subsistence focus are viewed as cultural adaptations to a changing environment, beginning with the gradual environmental warming in the late Pleistocene, the desiccation of the desert lakes during the early Holocene, the short return to the pluvial conditions during the middle Holocene, and the general warming and drying trend that currently continues. (Warren 1986)

b. Ethnography

The Project is situated within the traditional boundary region of two Native American groups: the Gabrielino and the Cahuilla. (Kroeber 1908; Bean and Smith 1978; Bean 1978) These groups, similar to other Native American groups in southern California, were semi-nomadic hunter-gatherers who subsided on seasonal plant and animal resources. The first written accounts of the Gabrielino and Cahuilla are attributed to Spanish Mission fathers who described their encounters in the late 18th century. Numerous ethnographers documented these tribes, including Barrows (1900), Bean (1972), Blackburn (1962-1963), Hooper (1920), Strong (1929), and many others.

Gabrielino: Many of the native cultural groups were named for the Spanish period missions in the area. An example is the term 'Gabrielino' which is given to the tribes inhabiting the region around the Mission San Gabriel. The Gabrielino were hunters and gatherers who utilized food resources along the coast as well as inland areas of Los Angeles, Orange, San Bernardino, and Riverside Counties during ethnographic times. (Kroeber 1925; Heizer 1968)

The lifestyle of the Gabrielino was considered semi-sedentary, living in permanent communities near inland watercourses and coastal estuaries. They caught and collected seasonally available food; groups moved to temporary camps to collect plant resources like acorns, buckwheat, berries, and fruit as well as conducting communal rabbit and deer hunts. Seasonal camps were also established along the coast and near estuaries where they would gather shellfish and hunt waterfowl. (Hudson 1971)

Social organization for the Gabrielinos was focused on families living in small communities. Patrilineally organized, extended families would occupy villages; both clans and villages would marry outside of the clan or village. (Heizer 1968) The villages were administered by a chief whose position was patrilineal, passed from the father to the son. Spiritual and medical activities were guided by a shaman; group hunting and fishing were supervised by individually appointed male leaders. (Bean and Smith 1978)

Cahuilla: The other Native American group inhabiting the Santa Ana River area was the Cahuilla. Their traditional territory encompassed diverse topography ranging from the Salton Sink to the San Bernardino Mountains and San Gorgonio Pass. (Bean 1978; Kroeber 1925) The Cahuilla were generally divided into three groups: Desert Cahuilla, Mountain Cahuilla, and Pass Cahuilla (Kroeber 1925). Like other Southern California Native American groups, the Cahuilla were semi-nomadic peoples, leaving their villages and using temporary camps near available plant and animal resources.

Cahuilla villages usually were in canyons or near adequate sources of water and food plants. The immediate village territory was owned in common by a lineage group or band. The other lands were divided into tracts owned by clans, families, or individuals. Trails used for hunting, trading, and social interaction connected the villages. Each village was near numerous sacred sites that included rock art panels. (Bean and Shipek 1978)

Social organization of the Cahuilla was patrilineal clans and kinships groups known as moieties. Lineages within a clan cooperated in defense, subsistence activities, and religious ceremonies. Most lineages owned their own village site and resource plots; although the majority of their territory was open to all Cahuilla people. (Bean 1978)

Spring Rancheria was one of the Cahuilla villages near the Project, located on the north side of Little Mt. Rubidoux at the point where Spring Brook joined with the Santa Ana River. This village was occupied from approximately 1880-1900. The village was listed in the 1889 *Riverside City Directory* which documents that the villagers worked for the residents of nearby Riverside. (Gunther 1988) Tom Patterson, in his book *A Colony for California* (1971:138) cites early Riverside resident, Jesse Burnham as stating "… there were three big Indian rancherias within a mile of town; one in Fairmount Park, one at the brook behind Little Rubidoux (Spring Rancheria), and one at the foot of Rubidoux Mountain".

c. Records Search

Data from the EIC indicates that 42 cultural resource studies have been conducted within the one-mile radius of the hospital campus, none of which are within the current Riverside Community Hospital property. Outside of the Project boundaries but within the one-mile

radius, 12 archaeological sites have been recorded. One of these, CA-RIV-3248 (Chinatown) is within 30 meters west of the Project. A second resource is within 350 meters northeast of the Project; this is CA-RIV-5831H, also known as the Old Magnolia Avenue Trolley and Refuse Dump and the site of the current Newman Park. The archaeological sites within the one-mile search radius are listed below. In addition to the archaeological resources, the records search identified 190 historic buildings and structures within the one-mile radius, none of which are within the Project:

Archaeological Resources Within One-Mile of the Project

PRIMARY NUMBER	TRINOMIAL	DESCRIPTION
33-000678	CA-RIV-678	Spring Rancheria
33-003248	CA-RIV-3248	Chinatown
33-003358	CA-RIV-3358	Refuse Deposit
33-004170	CA-RIV-4170	Refuse Deposit
33-004172	CA-RIV-4172H	Bedrock Milling Feature
33-004495	CA-RIV-4495	Mary Evan's Booster Station
33-004791	CA-RIV-4791	Upper Riverside Canal
33-007838	CA-RIV-5831H	Lower Riverside Canal
33-11006	CA-RIV-6646H	Magnolia Avenue Trolley Line Refuse Deposit
33-13917	CA-RIV-7616	Historic Refuse Deposit
33-13941	CA-RIV-7631	John W. North Park
33-19936	CA-RIV-10126	Historic refuse deposit

The following are descriptions of the two nearest archaeological sites.

Chinatown CA-RIV-3248. The approximately 2.5 acre site of Riverside's Chinatown is located across Brockton Avenue from the hospital at the northwest corner of Brockton and Tequesquite Avenues. The Chinatown site is the eastern portion of a larger property where a village of Chinese immigrants existed from 1885 until the 1930s. Chinese immigrants performed important tasks that helped in the establishment Riverside. These included work on railroads and laboring in Riverside's major economic engine, the citrus industry. Chinese immigrants also performed many other services in the City or Riverside. Beginning in 1943, and until his death in 1974, Mr. George Wong (Wong Ho Luen) owned the site and lived there alone.

Chinatown was originally recorded in 1968 as a California Point of Historical Interest, Number RIV-008; at the time of this recording the plot was listed as a seven-acre settlement founded in 1886 by Duey Wo Lung, a pioneer Chinese resident of Riverside. The site was recorded in 1980 as a result of a survey conducted by Dr. Nancy Wey with the Chinese American Survey of San Jose, California. Dr. Wey recorded the site as The Site of Historic Chinese American Community, or 'Chinatown'. She described the site as torn down in 1977 to make way for a parking lot that was subsequently not built. The last standing buildings were referred to as one single building but were, in fact, a series of six adjacent buildings that shared common walls to save space and expense. After Mr. Wong's death

in 1974, the site changed hands several times and in 1979 was acquired by the Riverside County Office of the Superintendent of Schools. Plans by County Schools to lease the site for a parking lot in 1984 led to a grass-roots citizens' movement to halt construction of the parking lot until an archaeological study of the site could be conducted.

In 1985, a non-profit research organization, the Great Basin Foundation, conducted an exploratory excavation of a small section of the site. This excavation established that brick foundations still exist below ground. A large portion of the original 7-acre plot was by then occupied by a County Schools maintenance and operations facility. The test excavation confirmed the Chinatown proper as being the 2.5-acres east of the maintenance and operations facility's improvements.

The Chinatown site was nominated for inclusion to the National Register of Historic Places in 1990. The site had been looted by pot-hunters over the years prior to the nomination. Some of these artifacts were returned to, and are curated at the Archaeological Research Unit at UCR.

The Old Magnolia Avenue Trolley Line and Refuse Deposit CA-RIV-6646H. This site consists of the old Magnolia Avenue trolley line and a refuse deposit located south of 14th Street in the vicinity of Magnolia Avenue. The site was recorded in 1996 by CRM Tech, which conducted a test excavation trench in the site. The test trench revealed that historic refuse was at least 15 feet deep and is now buried below modern-day curb and gutter, streets and sidewalks. The majority of the refuse consisted of bricks, bottle glass, ceramic, and iron artifacts. The true extent of the site, both vertically and horizontally, was not determined by the testing program. Newman Park is situated over at least a portion of the site. (Love and Tang 1995)

The site is located on land that was altered in 1913 when a segment of the Tequesquite Arroyo was filled to accommodate road construction. The fill dirt extended to a depth of 14 feet deep; and therefore artifacts recovered below this depth represented domestic refuse deposits that predated the 1913 construction project. The artifacts recovered dated as early as 1895. The test program and artifact analysis conducted by CRM Tech in 1996 suggests, given the location of the site on the edge of Riverside's original downtown (Mile Square) that the refuse deposit could likely have been the location of the early town dump. CRM Tech concluded that the site held very high research potential for interpreting turn-of-the-century economics and lifestyle of Riverside. (Ibid)

Calvary Presbyterian Church Walkway/Tunnel: In the course of the field investigation by Virginia Austerman, some old improvements related to Calvary Presbyterian Church were discovered. The improvements consist of a set of stairs, a concrete pipe tunnel under a church drive and a pathway on the other side of the drive. The stairs and tunnel are now largely covered with fill dirt. While this feature is on the southerly border of the hospital, it appears to be entirely within church property. This feature has been recorded on the DPR forms for the overall church, included in Appendix K of Volume Two of this

report. These improvements are important to an understanding ot Calvary Presbyterian Church's history, as they give evidence to a time when a substantial connection between the church and Evans Athletic Field and a remote parking lot in that area were important.

5. Historic Context - City of Riverside

a. Historic Context - Prior to Riverside's Founding

The entry into this area by Spanish explorers marked the end of the "prehistoric" period of Indian life. The first non-Indian to enter the Riverside area was explorer Father Francisco Garces. Father Garces' exploration of this area occurred during his travels from Yuma to Mission San Gabriel in 1771. Garces' visit was followed by a contingent of Spanish soldiers led by Pedro Fages the next year. Fages was sent into "Alta California" to track down deserters from the Spanish garrison in San Diego. Juan Bautista de Anza traversed the area during two expeditions between 1774 and 1776 in an effort to establish an overland route through Alta California. His records indicate the presence of Indian villages on what is now the Riverside bank of the Santa Ana River at Anza Narrows northeast of Van Buren Boulevard. (Lech, 2004)

Spanish rule over California extended from 1776 to 1821. During this period, Franciscan priests established a system of missions that formed strategic centers from which the Spanish exerted control over the people and lands of California. The southern Riverside area was under the influence of Mission San Luis Rey, while the northern portion was under the influence of Mission San Gabriel. (Patterson, 1996) The area in the vicinity of the subject property was under the influence of Mission San Gabriel.

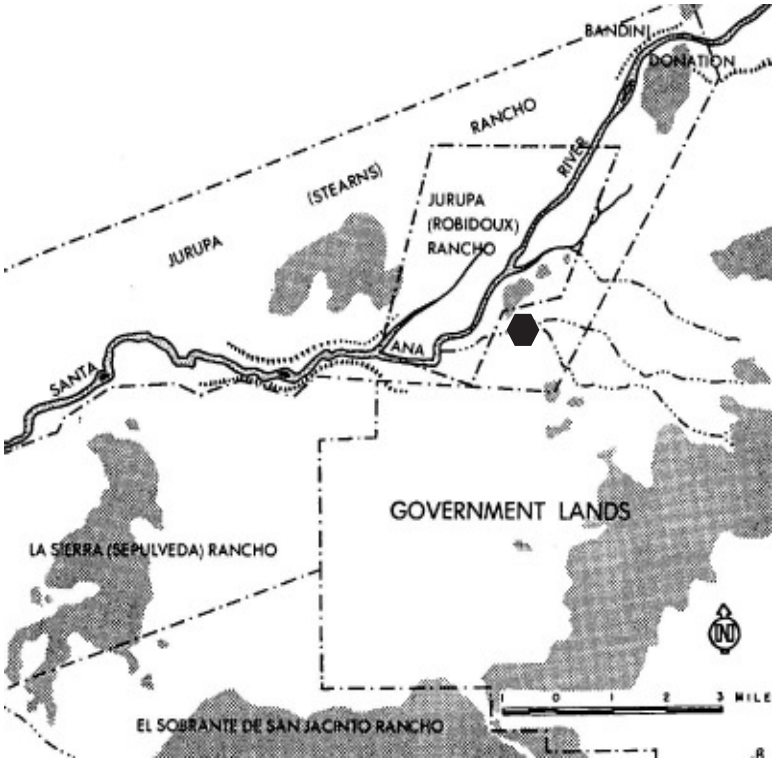


FIGURE 6: LOCATION IN RELATION TO MEXICAN RANCHOS

Spanish rule of Southern California was replaced by Mexican rule in 1821. The mission lands of this era were largely devoted to

cattle and sheep ranching and small-scale farming. In 1833, the Secularization Act was passed, and the mission lands were divided into ranchos that became the property of largely non-Indian ranchers. Four Mexican ranchos extended into Riverside, including the Jurupa (Robidoux), Jurupa (Stearns), La Sierra (Sepulveda), and El Sobrante de San Jacinto. The area of the subject property was in the Jurupa (Stearns) Rancho, just south of the Jurupa (Robidioux) Rancho.

The Mexican-American War ended Mexican rule over California, which became part of the United States in 1848. By 1860, advances in irrigation fostered a booming agricultural industry in the Riverside area. In the 1860-70s the U.S. Land Commission confirmed the Spanish Land Grants and all lands outside the Ranchos became "Government Lands".

b. Historic Context – The Riverside Colony

In 1869, John Wesley North and Dr. James P. Greeves assembled a group of investors to establish a new Californian colony. North was a freethinking idealist who envisioned his colony to be a special place for motivated, high principled people. North's flier, "A Colony for California", emphasized that this would be a colony of "…of intelligent, industrious and enterprising people so that each one's industry will help to promote his neighbor's interests as well as his own."

North initially favored land in the area of what is now Pasadena; however, fellow investors Greeves and Ebeneezer G. Brown were attracted to land on the former Jurupa Rancho owned by the California Silk Center Association. The Silk Center Association had acquired this land in 1868 for the purpose of cultivating silk worms. However,

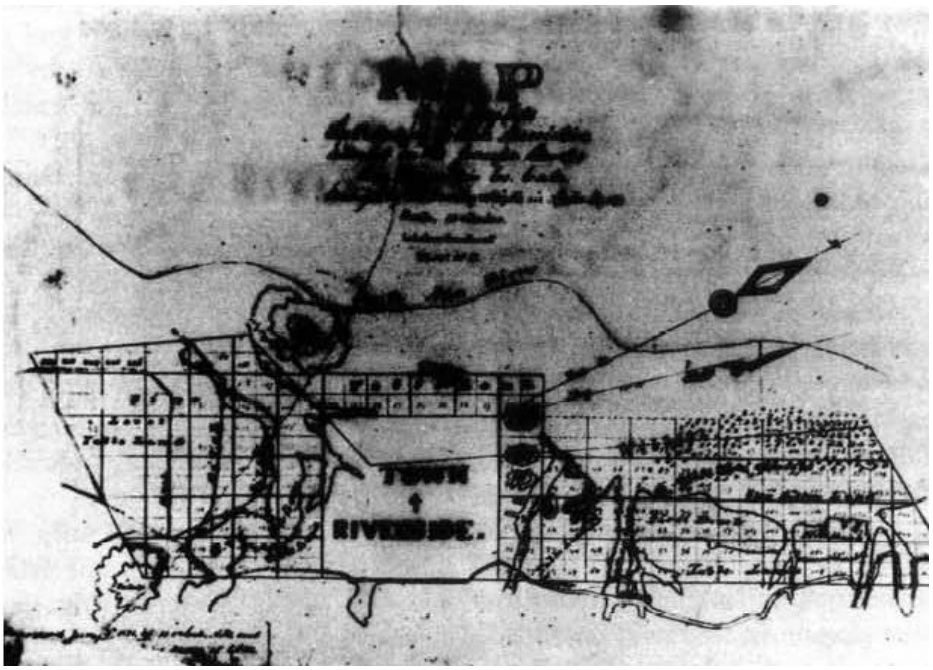


FIGURE 7: ORIGINAL MAP OF THE RIVERSIDE COLONY

SOURCE: *A COLONY FOR CALIFORNIA* by Tom Patterson

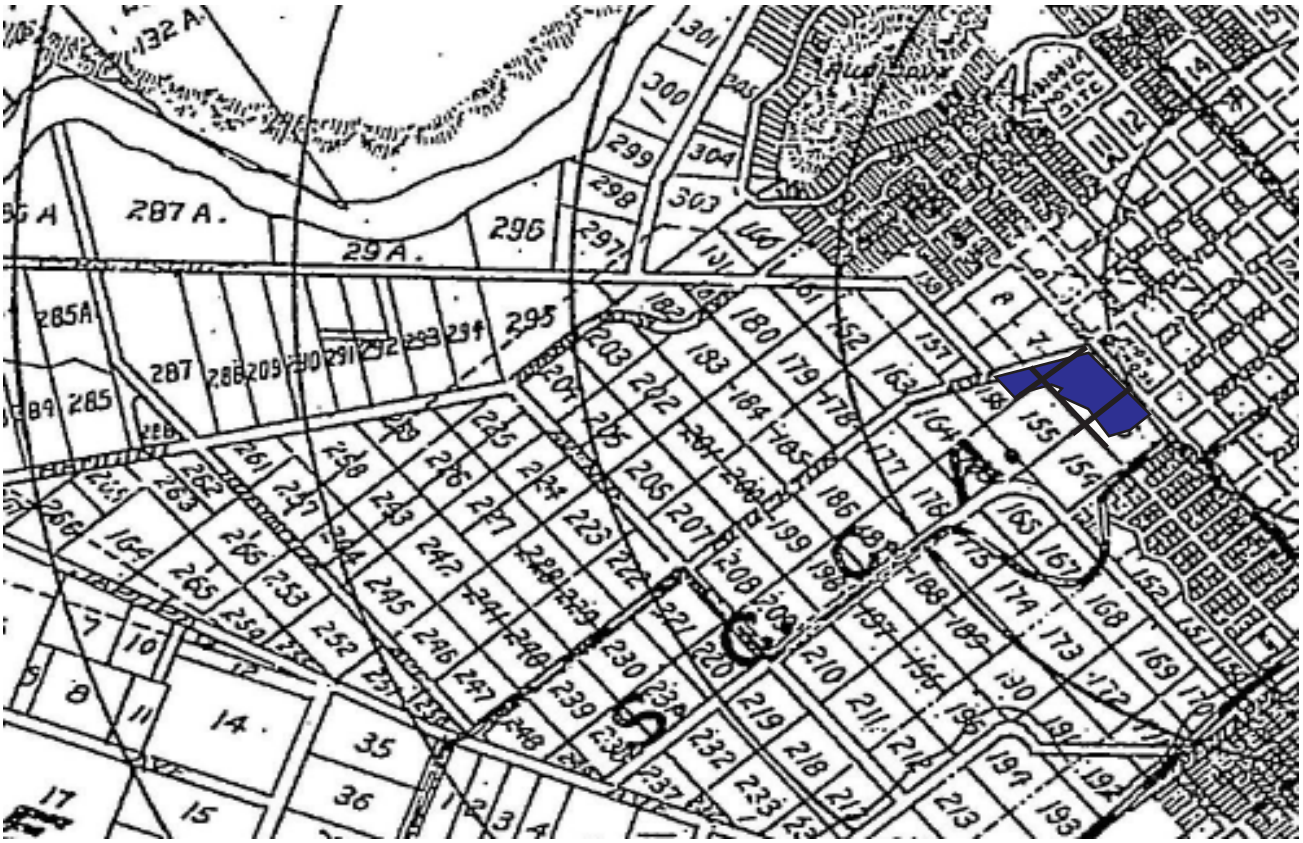


FIGURE 8: SUBJECT PROPERTIES IN RELATION TO THE ORIGINAL RIVERSIDE COLONY MAP

SOURCE: CITY OF RIVERSIDE LOCAL HISTORY RESOURCE CENTER

by 1870, the venture had failed and its principals were looking for someone to buy their land. Greeves and other partners in the venture liked the Silk Center location and convinced North of the wisdom of their preference. Thus, in 1870, the 8,600 acre Silk Center land became the Southern California Colony Association (SCCA), the nucleus of the future Riverside.

In 1870, the engineering firm of Goldsworthy and Higbie drew a map subdividing the Colony's lands into two distinct areas. In roughly the center of the colony, a mile-square area, designated the "Town of Riverside", was divided into 169 blocks, each 2 ½ acres in size. This area, more commonly known as the "Mile Square", was intended for urban development with a commercial core and town square plaza, surrounded by residential neighborhoods. The land outside of the Mile Square was divided into farm lots, most about 10-acres in size. The subject property extends into portions of what were Farm Lots 6,7, 155, and 156.

6. Historic Context - Downtown Hospital Locations

Before the Riverside Community Hospital campus was built at Magnolia Avenue and 14th Street, the hospital occupied two other locations elsewhere in Riverside's downtown. At that time the institution was known as Riverside City Hospital. Below is a summary of those locations:

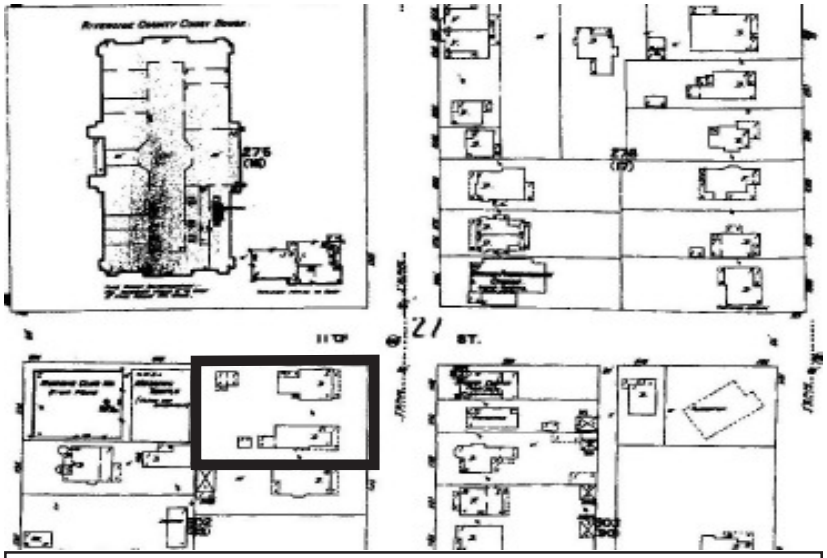


FIGURE 9: 1908 SANBORN MAP SHOWING FIRST CITY HOSPITAL SITE

SOURCE: SANBORN FIRE INSURANCE COMPANY

a. Riverside City Hospital - Orange Street Location

On December 2, 1901, several Riverside physicians met at the Tenth Street home of Dr. C. Van Zwallenburg to discuss the need for a city hospital. The doctors were tired of the lack of appropriate medical facilities and they knew that the County's hospital was not designed to meet the needs of private patients. Lacking a local private hospital, doctors were forced to do minor procedures in their offices or patients homes, and found it necessary to send patients with serious afflictions to hospitals in Los Angeles. The doctors agreed to fund a private hospital by selling stock at $1.00 per share. Each of the physicians present at the meeting committed to buying at least $100 worth of stock. (Riverside Community Hospital 2000: 2)

When sufficient funds had been collected, the Hospital Association leased a 12-room house at the southwest corner of Eleventh and Orange Streets to serve as the City's first hospital. Riverside City Hospital opened in this residence on October 30, 1902. Around the same time as the hospital's opening, the Hospital Association established a school of nursing.

Demand for hospital services increased quickly, and by 1903, the Orange Street hospital was overwhelmed with patients. Once again, Riverside physicians were forced to send many of their serious cases by train to Los Angeles. (Ibid: 3)

b. Riverside City Hospital - Walnut Street (Brockton Avenue) Location

To meet the need for expanded facilities, a new funding campaign was established and, before long, Riverside's citizens had purchased $21,335 worth of shares to build a new 30-bed hospital worth approximately $25,000. A site was chosen at the southwest corner of Walnut (now Brockton Avenue) and 11th Streets and, in May of 1904, a new two-story purpose-built hospital opened. The new facility included 19 single bedrooms and two wards. Concurrently with the opening of the new hospital, the nursing school graduated its first class of nurses, ready to staff the new institution. (Ibid: 4)

By the end of the decade, however, the City's growth to 50,297 residents was already straining the capacity of what was a state-of-the-art facility just six-years earlier. Helping to reduce demand on the hospital, the Riverside Women's Club organized the City's first County Clinic to provide care to those of little means. The first location for the Riverside County Clinic was rented space above the Keystone Drug Store at the corner

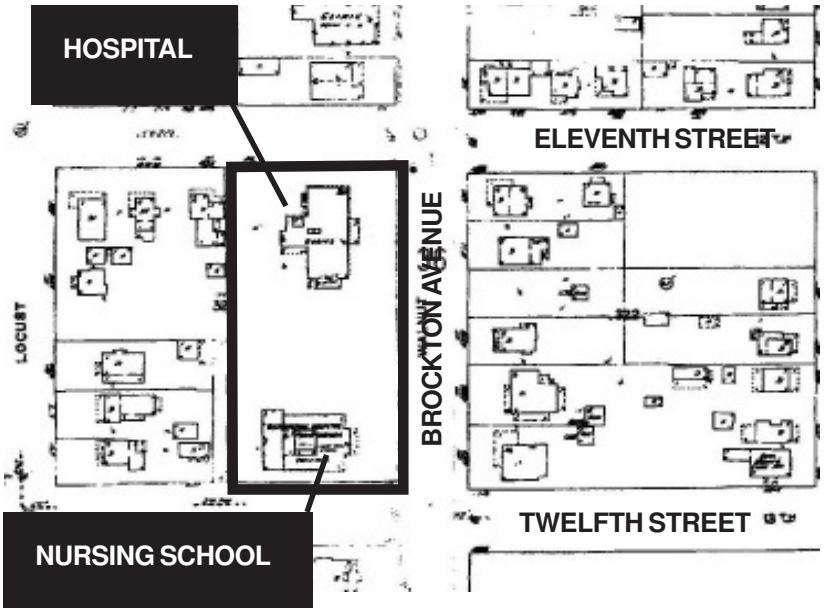


FIGURE 10: CITY HOSPITAL AND NURSES' SCHOOL LOCATION

SOURCE: SANBORN FIRE INSURANCE COMPANY MAP - 1952

FIGURE 11: RIVERSIDE CITY HOSPITA - 1904

SOURCE: 1904 POSTCARD IMAGE

of Eighth (now University Avenue) and Main Streets. Later, the clinic moved to the Loring Building across Main Street. (Ibid: 8)

FIGURE 12: OLIVE FRANCIS BARTON NURSING SCHOOL, LATER OSTEOPATHIC HOSPITAL

Photo courtesy Riverside Metropolitan Museum

The Riverside Nursing School quickly distinguished itself as a source of high-quality professional nurses. However, the nurses school was remote from the hospital, placing a burden on the nurses and often delaying the arrival of staff in emergencies. Mrs. Florence Barton Loring noticed this inefficiency while recovering in a private room in the Walnut Street facility. After being discharged, she addressed the need by donating $5,000 to build a new school and dormitory facility adjacent to the hospital, at the northwest corner of Walnut (now Brockton Avenue) and Twelfth Streets. The school was named the Olive Francis Barton Nurse's Home, in honor of Loring's mother. Later this building would be used to house the Riverside Osteopathic Hospital. (Ibid: 9) This nurses' school building still stands at the northwest corner of Brockton Avenue and 12th Street. Significantly altered, it is nonetheless readily identifiable by the original fanciful chimney.

World War I had a profound influence on the Walnut Street hospital. To meet the demands of war casualties, nurses and doctors were drawn away from private hospitals and clinics for service in the military. Eighteen nurses left Riverside City Hospital to assist in the war effort during World War I. Afterward, a worldwide influenza epidemic struck, taking more casualties than World War I. (Ibid: 10) With these additional pressures, coupled with deficiencies in the Walnut Street hospital's original design, the need for a new hospital was becoming clear.

7. Historic Context - Pre-Hospital History of the Upper Hospital Campus

The existing hospital, located between Magnolia Avenue, Brockton Avenue and Fourteenth Street, naturally falls into two geographic areas, defined by the Tequesquite Arroyo. The lower area consists of the arroyo bottom and the slopes that define its edges. The upper area

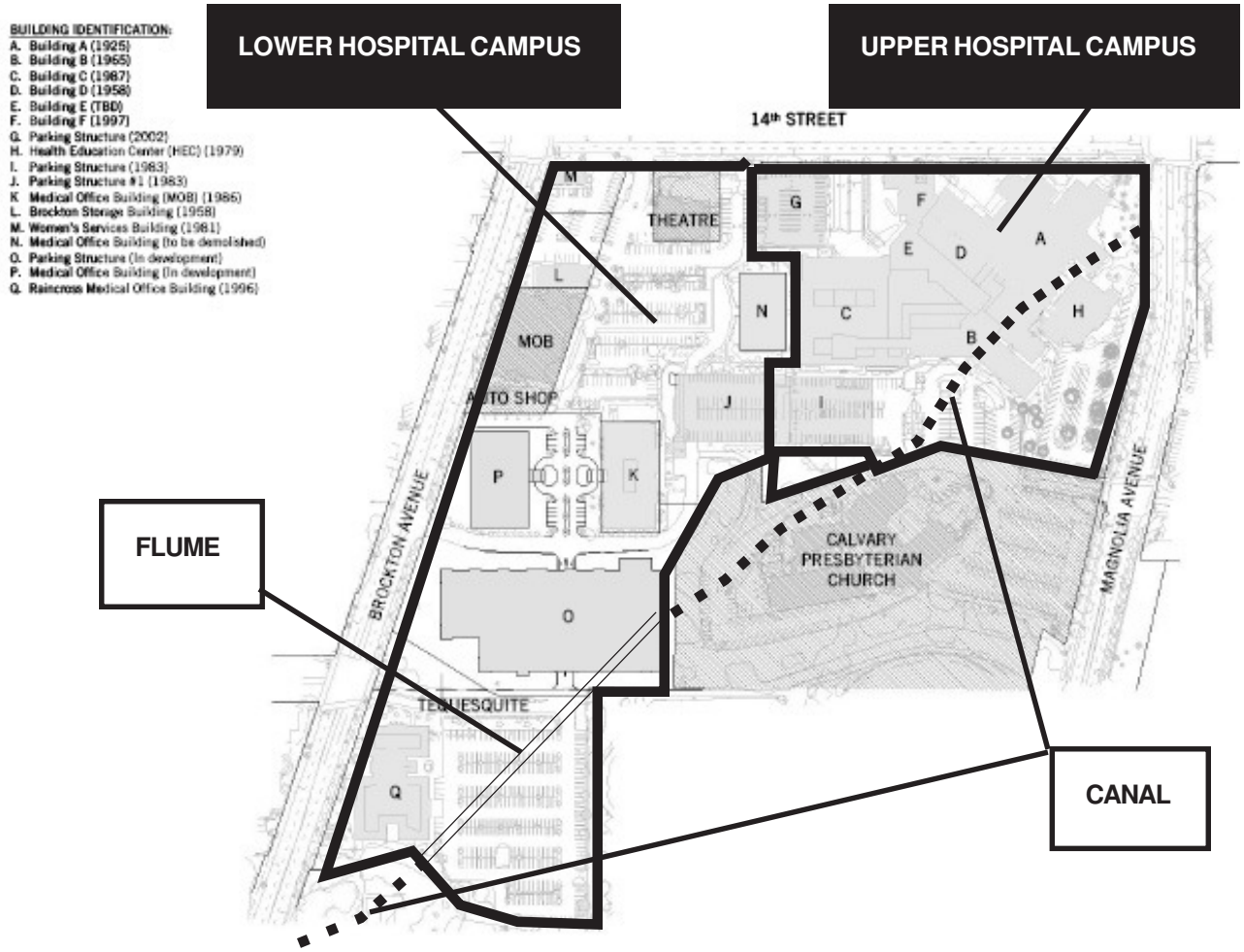


FIGURE 13: BOUNDARIES OF UPPER AND LOWER HOSPITAL CAMPUSES

SOURCE: PERKINS + WILL

consists of the bluff overlooking the arroyo. These lands are referred to in this report as the "bluff" or "Upper Hospital Campus". This section addresses the history of the bluff area before it was purchased and developed as a hospital facility.

Prior to its purchase for a hospital campus in 1923, the bluff area that constitutes the oldest part of Riverside Community Hospital was the location of farms, characterized by large fields of orchards, grain crops, scattered houses, and farm structures. Providing irrigation to these farms was the Riverside Lower Canal which crossed these lands roughly from today's intersection of Magnolia Avenue and Fourteenth Street to the area of Rice Road and Brockton Avenue. Where it crossed the arroyo, the canal water was carried via a wooden flume. Figure 13 is a site plan of the current hospital campus, showing the relationship between the upper and lower campuses and the former location of the canal. Figure 14 is a portion of a photograph taken from atop Mt. Rubidoux in 1910 showing the view toward the hospital

FIGURE 14: VIEW TO SITE FROM MT. RUBIDOUX - c. 1910

Image Courtesy of Riverside Metropolitan Musem

property. Figure 15 shows the relationship between the upper hospital campus and the portions of Colony Farm Lots 5 and 6 from which it was derived.

When the upper hospital campus property was purchased, the portion of Magnolia Avenue that forms the easterly border of the property was barely 10-years-old. Prior to 1913, Magnolia Avenue had its northerly terminus at Arlington Avenue. To continue from the end of Magnolia Avenue to downtown Riverside, one had to jog west at Arlington Avenue and then take Brockton Avenue north. Prior to Magnolia Avenue's extension, the street currently named Magnolia Avenue, between Jurupa Avenue and the Tequesquite Arroyo was named Cypress Street. To gain access to downtown Riverside from Cypress Street, one had to negotiate the steep sides of the Tequesquite Arroyo via a narrow switch-back roadway. A portion of today's Stadium Way once served as the means to reach downtown from Cypress Street. (*Riverside Press Enterprise,* 4-1-1979: B-2) Brockton Avenue was the preferred route between downtown and southwest Riverside, at that time, because it crossed the Tequesquite Arroyo at a much shallower point and necessitated fewer jogs in one's path of travel.

As the area south of the Colony lands grew, the need for a more convenient travel-way to downtown Riverside became important, and an extension of Magnolia Avenue to Cypress Street was deemed the preferred route. Magnolia Avenue had been laid out by Samuel Evans

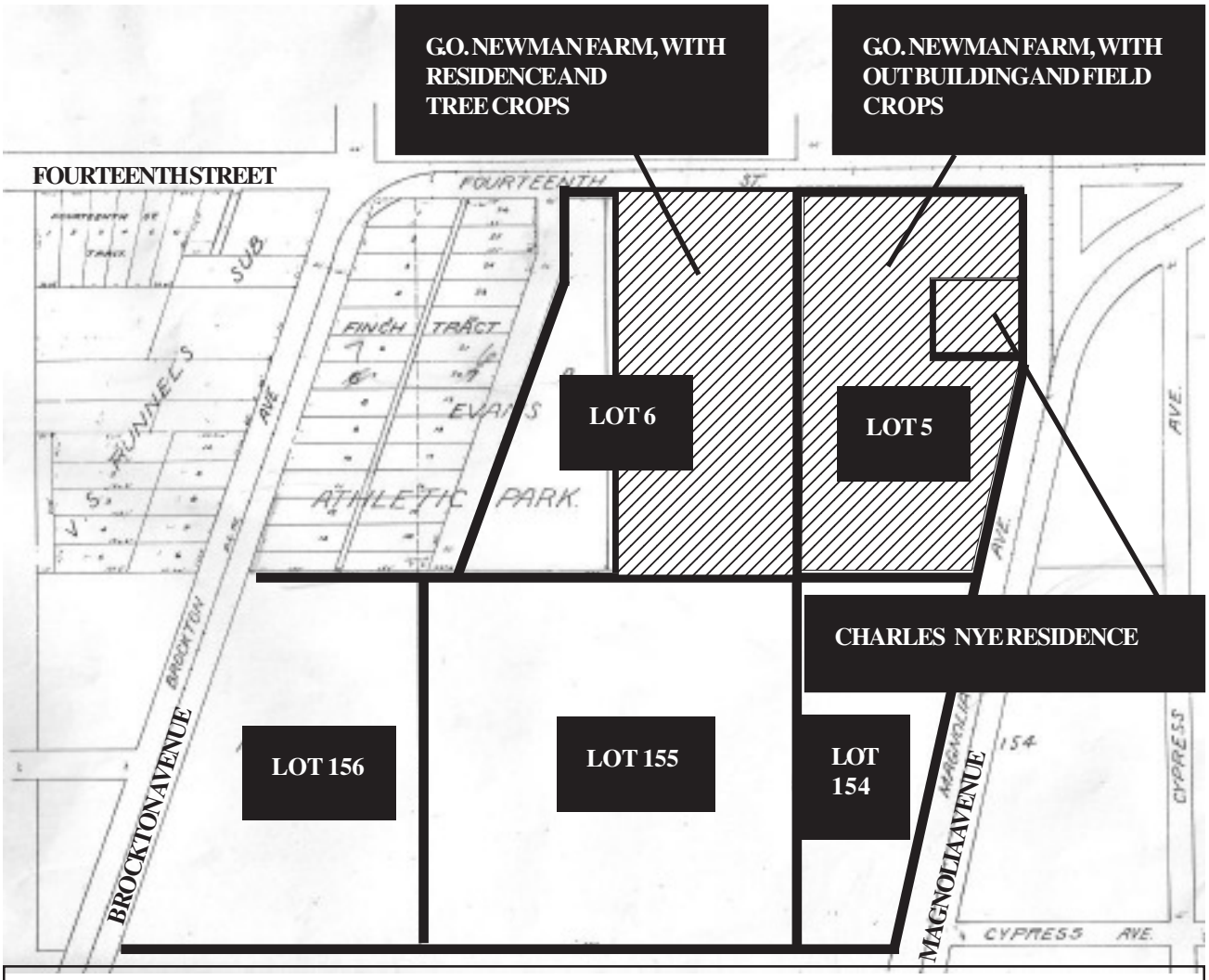


FIGURE 15: FARM LOTS AND IMPROVEMENTS BOUGHT BY HOSPITAL IN 1923

SOURCE: RIVERSIDE COUNTY ASSESSOR

in 1876. The purpose of the 132 foot wide dual carriageway was to serve as a centerpiece of Evans' extensive Riverside Land and Irrigating Company subdivision. The unique roadway extended southeasterly from Arlington Avenue to Temescal Canyon near Corona. It was Evans' plan that Magnolia Avenue would eventually extend all the way to the San Bernardino Mountains, but this never happened. (Patterson 1996: 69) Nonetheless, in 1910 Evans dream took another step toward realization when plans were approved to extend Magnolia Avenue from its terminus at Arlington Avenue to Jurupa Avenue. From there it would use Cypress Street to reach the Tequesquite Arroyo, crossing the arroyo via an earth fill. Subsequent to the completion of the extension, Cypress Street was renamed Magnolia Avenue, and for many years was known as "New Magnolia Avenue". (*Riverside Press Enterprise*, 10-241982: B2)

8. Historic Context - Hospital History of the Upper Hospital Campus

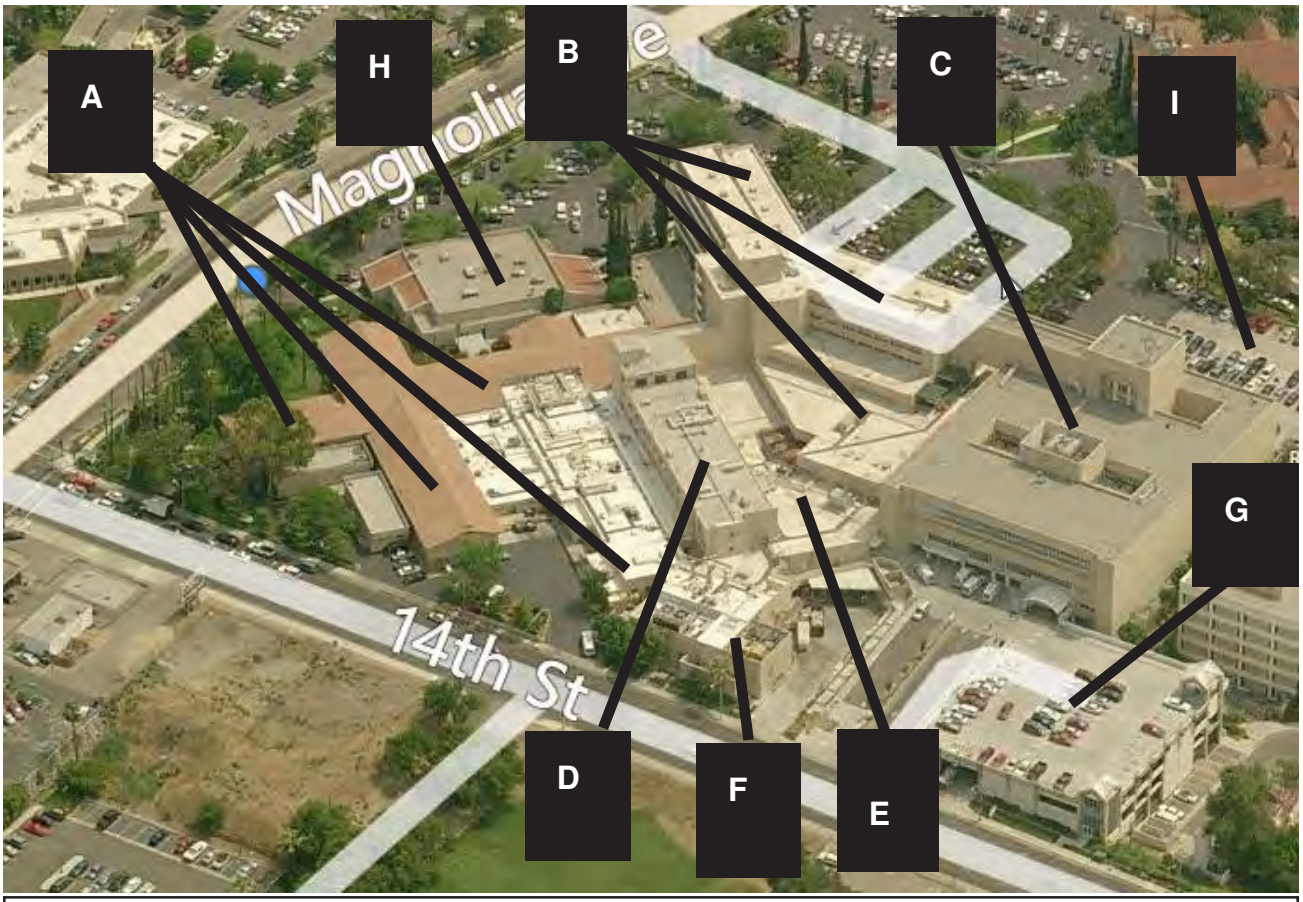


FIGURE 16: RELATIVE POSITIONS OF UPPER CAMPUS BUILDINGS

SOURCE: WWW.BING.COM/MAPS

Figure 16 is a current aerial photograph showing the relative positions of the buildings in the upper hospital campus. The following is the historic context of these buildings.

a. 1925 - Building A - Original Hospital Building:

In 1920, Dr. Van Zwalenburg, the same physician who spearheaded to funding campaign for both the Orange Street and the Walnut Street hospitals, launched a funding effort for a new hospital on the Magnolia Avenue/Fourteenth Street bluff. . This time, however, instead of being owned by shareholders, Van Zwalenburg envisioned that the new hospital would be a nonprofit institution operating independent of the profit motives of share holders. To help fund the new hospital, shareholders in the Walnut Street hospital were asked to donate their shares back to the nonprofit entity. Eventually all of the shares were either donated or sold back to the hospital. The goal was to build an 85-bed facility with a project price tag of $250,000 (Riverside Community Hospital 2000: 13)

Prominent Los Angeles based architect, Myron Hunt, was chosen to design the new hospital. Hunt had already made a name for himself in Riverside by designing the Spanish Wing of the Mission Inn and the Riverside Municipal Auditorium. Riverside residents were anxious to see a new hospital with some of the design elements of these buildings.

Federal Census records indicate that Myron Hunt was born in Sunderland, Massachusetts on February 27, 1868. Later records show Hunt and his family in Chicago. Hunt attended Northwestern University in Evanston, Illinois finishing his education at the Massachusetts Institute of Technology. Hunt was an early member of Frank Lloyd Wright's Prairie School.

Moving to Pasadena, he formed the architectural firm of Hunt and Grey with local architect Elmer Grey. Hunt and Grey became popular with wealthy clients who hired them to design residences. Later, they won commissions designing a variety of institutional and commercial projects, including the California Institute of Technology's predecessor the Thorpe Institute, in Pasadena. The firm also drew plans for Occidental College in Los Angeles and Pomona College in Claremont, California. Besides their work on the Spanish Wing of the Mission Inn, the firm also won other important hotel commissions, including the Ambassador Hotel in Los Angeles and the Wentworth Hotel in Pasadena. The Wentworth later became the famous Huntington Hotel. Other prominent projects designed by the firm included the Rose Bowl and Henry Huntington's house, which later became the main art gallery of the Huntington Library complex. By 1912, Hunt had dissolved his partnership with Elmer Grey and had established a new partnership with Los Angeles architect Harold C. Chambers. With Chambers, Hunt designed libraries in Redlands, Palos Verdes Estates, Santa Barbara, and Pasadena. Hunt died in 1952 after retiring to Port Hueneme, California. (https://digital.lib.washington.edu/architect/architects/198/, Accessed 2009)

By 1921, $195,919 had been raised for the new hospital, however, in that same year the Walnut Street hospital caught fire and it had to close for two months for repairs. Despite this setback, fund raising continued and in 1922, a five-acre site was selected at the southwest corner of Magnolia Avenue and 14th Street. The purchase price was $10,000. (Riverside Community Hospital 2000: 14)

On December 8, 1923 a building permit was issued for the hospital, with the Cresmer Manufacturing Company listed as contractor. The hospital was assigned the new address of 4445 Magnolia Avenue. Valuation for the job was listed at $275,000, well above the $250,000 target. (City of Riverside Building Permit Number 6542) In March 1925, the new Magnolia Avenue hospital was opened.

Figure 17 is a colorized post card aerial view of the hospital ca. 1925. In this photograph, one can see that the new hospital was a modern facility with Spanish Colonial architectural influences reflected in its red clay tile cross gable roof and its

FIGURE 17: AERIAL VIEW OF HOSPITAL - c. 1925

SOURCE: UNDATED POST CARD

arcaded front entry. The aerial photograph reveals that attached to the rear of the building was a utilitarian flat-roofed structure. This wing housed a kitchen, hospital services unit, and a boiler room. Most of the original hospital plant exists today; however, the majority of it is encapsulated within or blocked by newer construction. Only a portion of the easterly end of the original building remains open to view from outside the hospital campus.

While the physicians and osteopaths had cooperated in raising funds for the new hospital, after its opening, the MDs objected to having the osteopaths practicing side-by-side with them. At first the osteopaths were given a separate wing of Building A, but in 1928, the osteopaths moved to the former Olive Frances Barton Nurses Home building. By this time, the nurses had built a new facility adjacent to the new hospital and classes were being conducted in affiliation with Riverside Junior College. (Riverside Community Hospital 2000: 18-19)

The early years of the new hospital were fraught with debt problems. Landscaping proved to be an early obstacle and many of the needed plant materials were donated to the hospital. Most notable of these were the palm trees that now grace the northeast corner of the property at Magnolia Avenue and Fourteenth Street. These palms were donated to the hospital by noted palm tree authority and Riverside resident J. Harrison Wright to complement a palm grove he donated to Newman Park across Magnolia Avenue from the new hospital site. (*Riverside Daily Press,* 5-13-1925)

The Great Depression had a profound impact on Riverside Community Hospital. The City was particularly hard-hit by losses in its citrus industry. Issuance of building permits dropped from 407 in 1925 to just 32 in 1936. Fewer patients chose the services of Riverside Community Hospital and more patients sought the optional cost services of Riverside County Medical Clinic, then located in Building A's basement. Many patients could not even afford to pay the County Clinic's ten cent registration fee and the clinic

often had to settle for as little as six to seven cents per patient. (Riverside Community Hospital 2000: 23-24)

By 1940, war was raging in Europe, and Riverside Community Hospital was forced to wage its own battle against tuberculosis. And, despite the hard economic times and the pressures of disease, Riverside Community Hospital was again placed on the list of approved institutions by the American College of Surgeons. (Ibid: 27)

On April 2, 1941, a new laundry facility was added to Building A. (Riverside City Building Permit #22972)

On December 7, 1941 the United States' entry into World War II brought new challenges to Riverside Community Hospital. As with World War I, many doctors and nurses enlisted to serve in the military. This loss of personnel was exacerbated as military facilities were opened or expanded. Among the military facilities in the area were March Field, Camp Hahn, and Camp Anza. In just three years, Riverside's population added some 10,000 new residents, many of whom were military transplants. To meet the unprecedented demand, almost every part of the hospital was converted to bed space, including X-ray rooms, screened porches, and the nurses training auditorium. Patient loads increased from 365 in 1941 to 559 in 1943. (Riverside Community Hospital 2000: 29)

The war ended in late 1945; however, pressures on Riverside Community Hospital continued, with a postwar baby boom that added a new challenge for hospital resources. The hospital responded by reopening its maternity ward and adding a Children's Wing in 1949. (Ibid: 31-32) Demands from the baby boom continued into the 1950s. In 1952 alone, 1,200 babies were born in the hospital. Other pressures were felt in the emergency room where 4,086 cases were handled and in the operating room where 1,844 operations are performed that year. (Ibid: 34)

To take pressure off of other hospital facilities, a new 32-bed maternity wing was constructed. A permit for this wing was issued on July 15, 1949 and a final inspection was recorded on March 15, 1950. Listed as architect on the permit was Jay Dewey Harnish of Ontario. T.C. Pritchard & Son of Riverside was recorded as the contractor. (Riverside City Building Permit #9680)

Patient loads continued to increase as the 1950s unfolded, with the population of the City growing from 25,000 in 1925 to 60,000 in 1955. Surgical facilities designed for 1,800 surgeries were forced to accommodate 6,775 patients that year. (Riverside Community Hospital 2000: 38-39)

As shown in Figure 18, by 1960, the open arcades across the front of Building A had been filled in with offices and a new gabled entry had been added.

b. 1958 - Building D - First Bed Tower

As early as 1953, it was clear that Building A would not be able to meet the expanding needs of the hospital. To address these increased demands, a three-year fund-raising campaign was initiated to build a multi-story bed tower. J.B. Hunter of Hunter Douglas Aluminum Corporation spearheaded the fund-raising campaign, with his firm contributing $50,000 to the effort. Later he personally donated $25,000 after his son's life was saved by hospital emergency room personnel. (Ibid: 38) A surprise donation was offered by Mrs. Arthur McCallum, who spontaneously offered $5,000 toward the building during a meeting at which the hospital Board of Directors was explaining the plans for the new addition. (*Riverside Daily Press,* 11-23-1955) Many other local businesses also contributed to the new building, including Johnson Tractor Company, Citizen's National Trust and Savings Bank of Riverside, Flaherty and Adams Insurance, Bailey Patterson Insurance, Service Rock Company, Swiss Dairy, and Thompson Colgate Attorneys. (*Riverside Daily Press,* 9-23-1953) Figure 19 illustrates the outline of the proposed new building in relation to Building A.

FIGURE 18: FRONT ENTRY TO BUILDING A - c. 1960.

SOURCE: UNDATED POST CARD

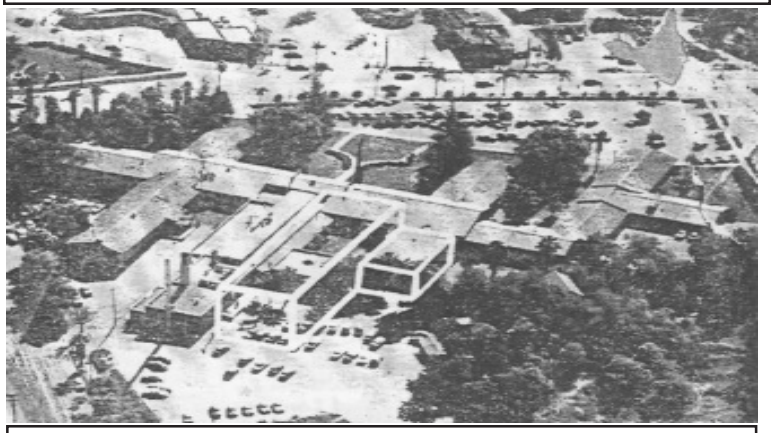


FIGURE 19: BUILDING D IN RELATION TO BUILDING A

SOURCE: *RIVERSIDE DAILY PRESS*, UNDATED NEWSPAPER CLIPPING IN *RCH, THE FIRST NINETY YEARS*, ND)

The commission to design the building was awarded to Jay Dewey Harnish of Ontario, California. Harnish was born on May 21, 1898 in Pennsylvania and died on July 6, 1991 in Ontario, California. (California Death Index) Mr. Harnish opened his practice in 1940 as an independent architect in Ontario, California. His firm began by designing

government housing during World War II, but soon expanded into the design of a wide variety of mostly institutional projects. Among these were 75 schools and 25 hospitals throughout Southern California. In 1960, his firm took on partners Jack Causey and Mel Morgan to become Harnish, Morgan & Causey. Among the hospitals his firm designed were San Antonio Community Hospital, Pomona Valley Hospital, Covina Intercommunity Hospital, Whittier Presbyterian Hospital, and Fontana Kaiser Permanente Hospital. (*Los Angeles Times,* 7-9-1991) His firm also designed San Bernardino Community Hospital #2, Garfield Hospital and Sanitarium in Glendale, CA, and Garfield Hospital, in Monterey Park, CA. (https://digital.lib. washington.edu/architect/architects/1056/, Accessed 2013)

FIGURE 20: BUILDING D - DESIGN CONCEPTS

TOP: EARLY CONCEPT
BOTTOM: FINAL CONCEPT

SOURCES:
TOP: *RIVERSIDE DAILY PRESS*, 9-21-1953
BOTTOM: *RIVERSIDE DAILY PRESS,* 9-23-1955

Harnish retired in 1978, at which point his firm became HMC Architects. This firm continues to practice today and is among the larger planning and design firms in California. The firm has a total of 10 offices throughout California and Nevada. (http://www.reed construction data.com/companies/21207/hmc-architects/, Accessed 2013)

The new 3-story Riverside Community Hospital bed tower was designed to include a basement, and engineered to accommodate three additional floors. . An early design concept for this building depicted it with a continuation of the Spanish Colonial Revival architectural influence of Building A. The final building design had a decidedly International Modern appearance. Figure 20 includes drawings of both these design concepts. As noted above, Harnish's firm designed a large number of hospitals. All of these were designed in a similar International Modern style.

FIGURE 21: BUILDING D TODAY - FROM 14TH STREET

SOURCE: WILKMAN HISTORICAL SERVICES

Building permit files do not include the permit for Building D; however, a *Riverside Daily Press* article documented the ground breaking for the first phase of construction as having taken place on August 11, 1954. The first phase consisted of the construction of a boiler room and laundry. *(Riverside Daily Press,* 8-12-1954) About a year later, the new boiler room and laundry had been completed. In an article about this accomplishment, *Riverside Daily Press* reported that, with these facilities on-line, the hospital would proceed to demolish the old laundry and begin pouring foundations for the new bed tower in its place. (*Riverside Daily Press, 9-23-1955)* Hospital records indicate Building D was completed in 1958.

Originally projected to cost $640,000, the final tab was about a million dollars. The new building had a capacity of 240 patients and included two minor and four major operating rooms, a cytoscopic operating room, a fracture room, a postoperative recovery room, an X-ray department, and an emergency facility. For the first time, patients were able to recover in air conditioned rooms. (Riverside Community Hospital 2000: 40-41) Building D also incorporated the first use of piped oxygen to each room. (*Riverside Daily Press,* 9-23-1953)

Today, Building D is largeley obscured by later construction. Figure 21 is a current photograph of Building D as seen from Fourteenth Street.

c. 1966 - Building B - Second Bed Tower

Entering the 1960s, the hospital expressed its desire to be a major regional facility. In December of 1961, Hospital Administrator Ray Ernst revealed plans for a new 229,522 square foot bed tower to allow the envisioned growth to occur. Local Riverside architect Herman O. Ruhnau was chosen to design the new six-story, 200,000 square foot building. (Riverside Community Hospital 2000: 43)

Herman Ruhnau was born in Pasadena, California on September 1, 1912, but spent the better part of his youth in Santa Barbara. (Press Enterprise, 6-13-2006) In 1929, his family moved to Riverside, where Ruhnau completed is last two years of high school. From there, Ruhnau attended Riverside Junior College, moving on to the University of Southern California to receive an education in architecture. After college, Ruhnau went to work for several well-known architectural firms, and during World War II was an architect for the U.S. Navy's Bureau of Yards and Docks. (Paul 1954: 466) In 1946, Ruhnau opened a Riverside branch office for Los Angeles based architects Heitschmidt and Matcham. In 1950, he opened his own architectural firm in Riverside. (Christopher A. Joseph and Associates 2009: 27) In Riverside, he quickly became one of the City's most prolific architects. Among the Riverside projects for which his firm was responsible are the following:

FIGURE 22: HERMAN RUHNAU - c 1954

SOURCE: PAUL, 1954: 466

- RCC Cosmetology Building (1957)
- Public Defender's Office, 4200-32 Orange St (1958)
- RCC Cutter Pool Complex (1957)
- Press Enterprise Building, 3514 14th St (1958)
- Marcy Library, 3711 Central Ave (1958)
- John Adams School, 8362 Colorado Ave (1958)
- UCR Entomology Building (1960)
- Community Hosp Bed Tower, 4445 Magnolia Ave (1966)
- UCR Health Services (1961)
- Riverside City Hall (1975)
- Riverside Police Department, 4102 Orange St (1965)
- Riverside County Law Library, 3535 Tenth Street (1969)
- La Sierra High School, 4145 La Sierra Avenue (1969)

(Ibid)

Figure 23 includes an early design concept for the new bed tower, showing a building with a largely glass exterior. In this bird's eye view, one can see the degree to which Building D would be encapsulated within Building B. Also in Figure 23 is a rendering of the final design. The revised design had a much more substantial feel than the early concept, with a more solid-looking exterior and a dramatic staircase feature at the east

end of the building. One design feature that remained constant between the early and late designs was the cast concrete folded plate entry element.

Ground breaking for Building B was held on April 22, 1964 and it was completed in January of 1966 at a cost of $5.5 million. The building was designed in keeping with the then accepted "Medical Center" concept, in which all hospital needs could be met in one building. (*Riverside Press-Enterprise,* 1-30-1966: A-7)

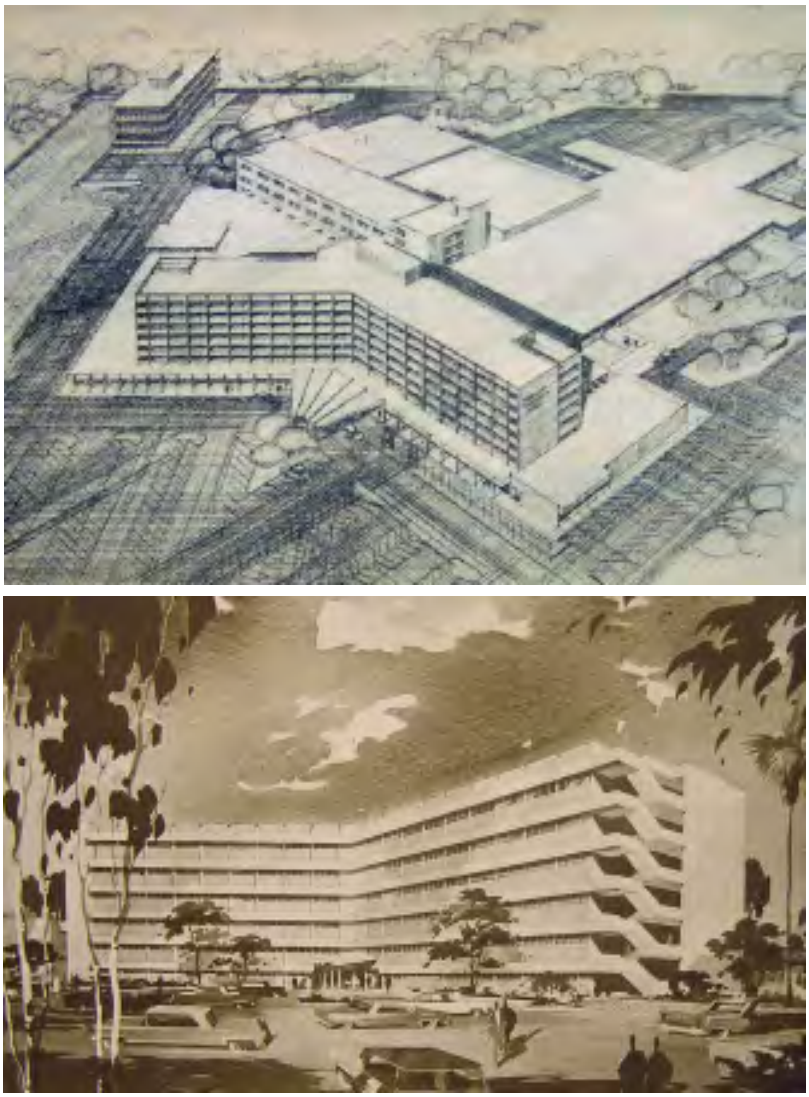


FIGURE 23: BUILDING B - TOP: EARLY DESIGN CONCEPT BOTTOM: FINAL DESIGN

SOURCES: TOP: *RIVERSIDE DAILY PRESS*, 12-27-1961
BOTTOM: UNDATED PROMOTIONAL BOOKLET, "DEDICATED TO LIFE"

The building added five new surgical rooms to the existing eight at the hospital. It also included separate wards for intensive care and new facilities for emergency care, outpatient treatment, maternity care, pediatrics, physical therapy, and pharmacy services. Only the first four floors were completed with the first phase of construction, the other two being left as shells for improvement at a later date. The building was also engineered to handle an additional two floors. The new facility increased the hospital's total bed capacity to 325.

Some loose ends remained even after the building was occupied. The Maternity Wing of Building A needed to be demolished, as it blocked direct access to the new bed tower. Also in need of final completion were corridors to the existing hospital buildings and the landscaping of the site. (Ibid) Figure 24 is a rare floor plan of the hospital campus as it appeared prior to the completion of Building B. In it, one can see how Building B sliced

through Building A and the relative position of the Maternity Ward prior to its demolition. It is also possible to see how Building B completed the envelopment of Building D.

d. 1980 - Building H - Health and Education

In 1980, a new building was built on the grounds of what had been the landscaped entry to the original Myron Hunt building (Building A). The new 20,200 square foot building was designed by local architects Cole and Frick and provided for the continuing educational needs of hospital staff who had often previously found it necessary to travel out of town for educational programs. The Health Education Center is also used by the general public.

e. 1983 - Building I - Parking Structure

South of the Building C, Critical Care Tower are two interconnected parking structures. The Building I portion of this four level parking reinforced concrete structure was built in 1983 to increase the parking capacity of the upper hospital campus. In 1986, it was expanded (Building J) to provide additional parking and allow access from the lower hospital

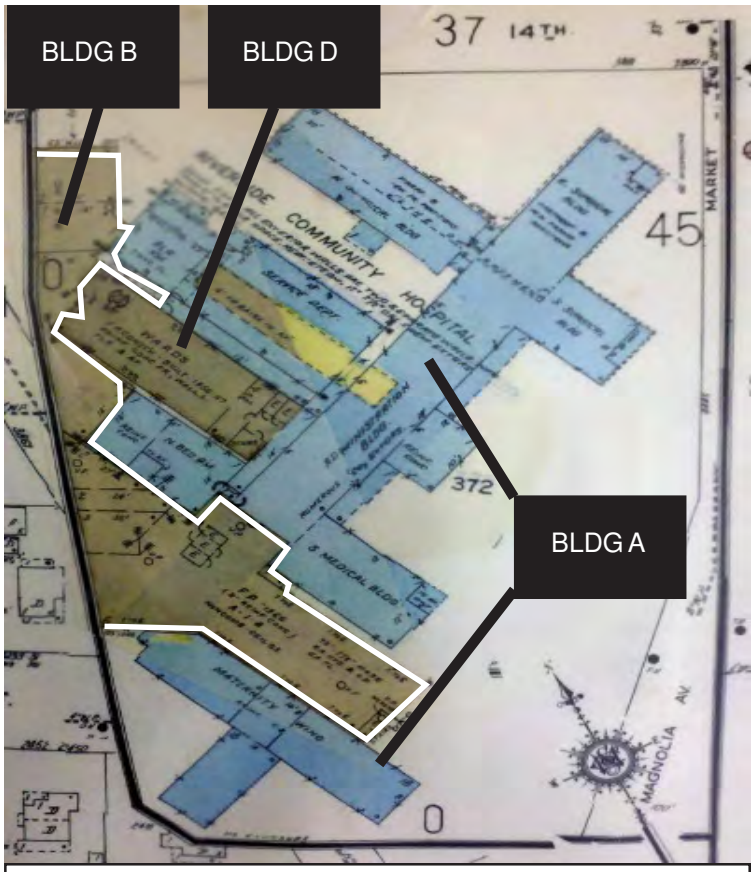


FIGURE 24: BUILDING B FOOTPRINT - 1965

SOURCE: SANBORN FIRE INSURANCE MAP - 1952-1965

FIGURE 25: BUILDING H - HEALTH & EDUCATION BUILDING

SOURCE: WILKMAN HISTORICAL SERVICES

campus. Figure 26 is a bird's eye view of this two-part parking structure, identifying the relative locations of the two halves.

f. 1988 - Building C - Critical Care Tower

In 1981, the hospital announced plans to open a new hospital-based cardiac treatment center. To accommodate this function a new six-story Critical Care Tower was completed in 1988 west of the Ruhnau designed bed tower. This $25 million structure was designed for 34 intensive care and heart patient beds, pre- and postoperative care units, ten suites for surgical care, a new emergency room, an outpatient surgery center, and a facility for processing supplies. Upon its completion, access for ambulances and walk-in emergency care patients moved from the central parking lot in front of Buildings B and C to the Fourteenth Street side of the hospital campus. The new location allowed for direct access to emergency services without having to mix with non-

FIGURE 26: BUILDINGS I AND J PARKING STRUCTURES

SOURCE: BING.COM/MAPS

FIGURE 27: BUILDING C - CRITICAL CARE

SOURCE: BING.COM/MAPS

emergency hospital traffic. Figure 27 is a bird's eye view of Building C, showing the full extent of the building.

g. 1997 - Building F - Emergency Generator Building

Built in 1997, this single-story building is attached to Buildings A, D, and E and has exterior walls visible from Fourteenth Street. It is a very utilitarian structure that houses emergency generators.

FIGURE 28: BUILDING F

SOURCE: WILKMAN HISTORICAL SERVICES

h. 2002 -Building G - Parking Structure

Accessed directly from Fourteenth Street, this reinforced concrete, two-level parking structure was built in 2002. It provides convenient public parking for the emergency hospital and the Heart Care Institute within Building C. Figure 29 is a view to this structure from Fourteenth Street.

FIGURE 29: BUILDING G - PARKING STRUCTURE

SOURCE: WILKMAN HISTORICAL SERVICES

i. Date Unknown - Building E - Radiology

Building E is an infill building between Buildings A, B, and D. It is not clear from building permits when it was built. Building E is mostly devoted to the hospital's radiology functions. It is largely not visible from the outside and therefore is not the subject of any significant analysis in this report.

9. Historic Context - Pre-Hospital History of the Lower Hospital Campus

The pre-hospital history of the lower hospital campus provided below is only a summary of the uses of the arroyo bottom land prior to its acquisition by Riverside Community Hospital in the 1970s. For a thorough examination of this era, the reader is referred to a report completed by WHS in January of 2013, entitled *Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Cultural Resources Impacts Report.* (WHS 2013)

The Lower Hospital Campus lands originally consisted of all or parts of Riverside Colony Farm Lots 6, 7, 155, and 156 of the original 1870 division of the Riverside Colony. The Riverside

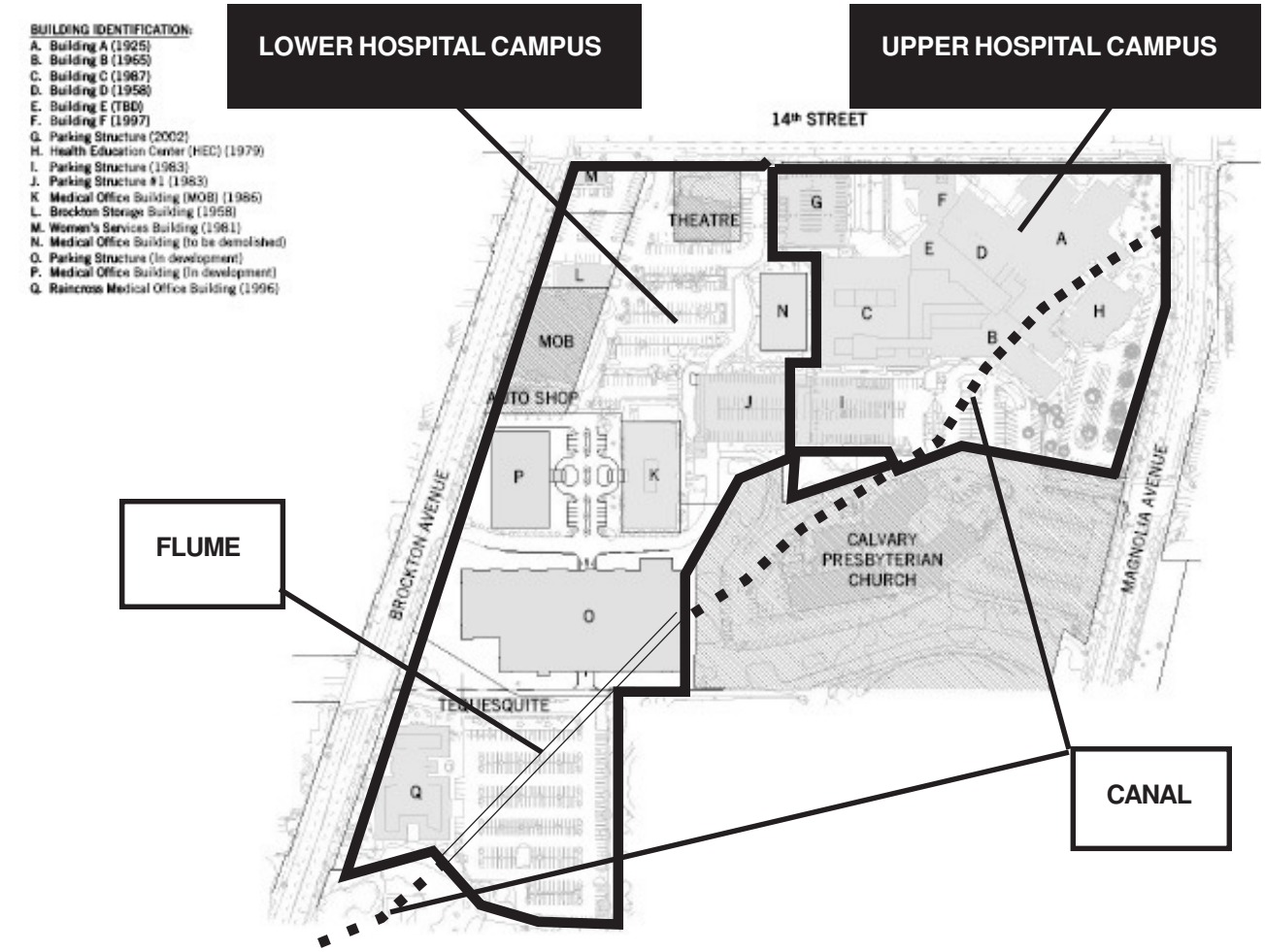


FIGURE 30: BOUNDARIES OF UPPER AND LOWER HOSPITAL CAMPUSES

SOURCE: PERKINS + WILL

FIGURE 31: B.S. FINCH TRACT

SOURCE: MAP OF B.S. FINCH SUBDIVISION, 1903, AVAILABLE AT THE RIVERSIDE COUNTY ASSESSOR'S OFFICE

Colony Farm Lots were intended to serve as agricultural lands to provide an economic base for the Colony and to help fulfill the daily needs of life in the more intensely developed urban core known as the "Mile Square." The Riverside Lower Canal once extended diagonally across the hospital property roughly from 14th Street and Magnolia Avenue to the approximate location of today's Brockton Avenue and Rice Road. The canal existed as a ditch through what is today the upper hospital campus and a portion of Calvary Presbyterian Church. At the Tequesquite Arroyo the canal transitioned into a wooden flume. South of the arroyo, it transitioned back into a ditch that flowed southwest along the southeast side of Brockton Avenue.

Assessor records for the years 1892 through 1903 indicate that the portions of Lots 6, 7, 155, and 156 that correspond with most of the lower hospital campus, were owned by Mrs. Berta S. Finch. In 1903, Mrs. Finch recorded the B.S. Finch Tract, the division of portions of Farm Lots

6 and 7 into 26 town lots. It appears that Mrs. Finch farmed parts of the property and the Assessor's documentation of $200 of taxable structures suggests she also lived on her land.

In the early part of the 20th century, some of the farms in the arroyo bottom were redeveloped as athletic fields. Donated to the City of Riverside by Samuel Evans Jr. in 1906, Evans Athletic Park, as it became known, was Riverside's central venue for numerous significant athletic competitions spanning the following eight decades. Before the advent of Evans Athletic Park, Riverside's sporting activities had taken place at three primary venues.

After an earlier effort failed, in 1892, the YMCA initiated a second effort to establish an athletic park. This effort was successful and resulted in the improvement of a multi-sport park on leased land situated between 3rd and 4th Streets, east of the main line railroad tracks that extended through Riverside east of the Mile Square. (*Riverside Daily Press*, 1-5-1892: 3)

In 1895, the Riverside Wheelmen's Club launched an effort to develop a new athletic park that would include a first rate bicycle racing track on land north of First Street and west of Market Street. (*Riverside Daily Press*, 4-27-1895: 3) The park was christened on Admission Day, September 9, 1895 with a bicycle racing event that drew athletes from all over the state of California and beyond. (*Riverside Daily Press*, 9-9-1895: 3) Sports accommodated at the facility included baseball, lacrosse, football, and track and field events. The Wheelmen's Athletic Park served as the center of Riverside's athletic activities into the early 1900s, but faded when the popularity of bicycling declined after the turn of the 19th century.

As the old Wheelmen's Athletic Park went into decline, the need for a replacement facility became apparent, and civic leader Samuel C. Evans Jr. stepped forward to fill that gap. At first, Evans offered to donate a two block area bounded by Locust, Cedar, Second and Fourth Streets to the City for development as a new athletic park. (*Riverside Daily Press*, 1-19-1906: 4) While the City's fathers greeted this proposal enthusiastically, neighboring property owners were opposed to the use of the land as an athletic park, fearing lowered property values caused by noise and traffic. (*Riverside Daily Press*, 1-20-1906: 5)

Ultimately, the problem was resolved in 1906 when Evans worked out a land swap with Berta Finch. Evans traded his two blocks of town lots formerly proposed for his downtown athletic park , for 10-acres of Mrs. Finch's arroyo bottom land southeast of Brockton Avenue and Fourteenth Street. Included in the deal were Lots 11 through 16 of the B.S. Finch Tract along with the portions of Farm Lots 155 and 156 owned by Mrs. Finch. The trade included Mrs. Finch's house which Evans saw as an ideal club house. (*Riverside Daily Press*, 1-30-1906: 4)

Primarily used for baseball, Evans Athletic Park also served as a venue for track & field, lacrosse, rugby, football, boxing, and even some social gatherings. Ownership of the land rotated between the City of Riverside and the Riverside Unified School District at various times.

In 1913 and 1914, the Chicago White Sox played exhibition games at Evans Athletic Park. The games proved quite popular with Riverside's citizens and to commemorate the Sox' appearance in Riverside they planted a redwood tree in Riverside's Low Park at the northwest corner of Magnolia and Arlington Avenues. (*Riverside Daily Press*, 3-25-1914: 3) This tree lives on and is designated a City of Riverside Cultural Heritage Landmark. The Sox returned to Riverside for exhibition play in 1919. (*Riverside Independent Enterprise*, 4-2-1919: 3)

A swimming pool was added to the arroyo bottom land adjacent to Evans Park in 1914. (*Riverside Daily Press*, 6-20-1914: 1 and 7-29-1914: 1) In 1917, Florence Barton Loring donated $3000 to the Riverside County Humane Society for the purpose of building a "model" Humane Home "…just south of Evans Athletic Park…." (*Riverside Daily Press*, 2-12-1917: 6 and 2-26-1917: 6)

1926 saw the introduction of "Night Ball" to the City of Riverside. The City's first Night Ball park was located at 13th and Main Streets in an arroyo that once dominated that location. Roy Hunt, owner of the Rubidoux Theater, built the crude stadium on leased land and throngs of fans came to see the games. (*Riverside Daily Press,* 4-23-1926: 13)The Rubidoux Athletic Stadium, as it was called opened on May 15, 1926. (*Riverside Daily Press,* 5-7-1926: 13) Hunt's Riverside "Rubes" baseball team was the star attraction at his stadium.

By September of 1929, however, Hunt was looking for a new facility to accommodate the growing numbers of fans that were overwhelming the minimal capacity of the Rubidoux Athletic Stadium. Hunt at first developed his Night Ball park on the athletic fields of Poly High School. (*Riverside Daily Press,* 11-23-1929: 10)

In 1932, serious planning was engaged in for the improvement of Evans Park as a Night Ball facility, but not purely for Night Ball league use. The Chamber of Commerce wanted to attract a Los Angeles Coast League team to Riverside for Spring Training. (*Riverside Daily Press,* 11-7-1932: 4 and 11-28-1932: 4)

In 1933, Evans Athletic Park's benefactor, Samuel C. Evans Jr., died at the age of 66. Evans had just been elected as the City's Mayor for the fifth time and was about to commence his new term. (*Riverside Daily Press,* 1-2-1933: 1) The passing of Evans added to the urgency of improving Evans Park as Riverside's premier baseball facility. Assurance of the ballpark's completion was achieved when City and Chamber of Commerce funds were boosted with financial aid from the Reconstruction Finance Corporation. (*Riverside Daily Press,* 6-16-1933: 12) With the money to complete Evans Park's improvements in hand, work on the facility proceeded in earnest and it was ready for use by July of 1933. (*Riverside Daily Press,* 10-25-1933: 13)

In December of 1933, the *Riverside Daily Press* reported that construction of a new athletic clubhouse, a one-story brick building of mission style measuring 36 feet by 52 feet, had commenced. (*Riverside Daily Press,* 12-22-1933: 6) This and other improvements helped attract Minor League baseball back to the park. March 1, 1934 saw the Los Angeles Angels take to Evans Park for 30-days of Spring Training. (*Riverside Daily Press,* 3-1-1934: 19)

FIGURE 32: EVANS PARK HISTORIC PHOTOS

ABOVE: NIGHT BALL GAME AT EVANS PARK - RUBES VS. RANGLERS - 9-5-1949
BELOW: BIRD'S EYE VIEW OF EVANS PARK c. 1955

SOURCES: ABOVE: RIVERSIDE METROPOLITAN MUSEUM, BELOW: RCC DIGITAL LIBRARY ARCHIVES

In March of 1934, the *Riverside Daily Press* announced that the City Council had approved the construction of a horse riding arena adjacent to the Humane Society in the Tequesquite Arroyo

south of the ball fields. (*Riverside Daily Press,* 4-15-1935: 7) In 1936, Riverside members of the Orange Belt Archers Association built an elaborate archers' range in the area south of Evans Park. (*Riverside Daily Press,* 4-3-1936: 7)

In 1936, announcements were made that Sacramento's Pacific Coast League, the Solons, planned to conduct Spring Training at Evans Park. The Solons had previously been known as the Senators before the team was bought by Branch Ricky's St. Louis Cardinals. An article in the *Riverside Daily Press* recounted that this was the first taste of Minor League play Riverside would have seen since the Los Angeles Angels and Hollywood Stars played on Evans Field in 1934. (*Riverside Daily Press,* 2-22-1936: 11)

The arrival of the Solons for Spring Training coincided with a tryout camp at Evans Park. Among others, baseball veterans Joe Schultz, Charlie Barrett, Billy Southworth, Kenesaw Mountain Landis, and Ira Smith planned to evaluate the hopefuls. (*Riverside Daily Press,* 2-5-1936: 8) Also making appearances at Evans Park was the Minor League Hollywood Angels. To accommodate practice, a special batting cage was built at the Evans Park facility. (*Riverside Daily Press,* 3-4-1936: 13)

Evans Park's success as the Solons' Minor League training camp site in the spring of 1936, led to an early decision to book the facility for the Solons' 1937's spring training. The deal was the result of the fact that Branch Ricky, manager of the St Louis Cardinals and owner of the Sacramento Solons "…was greatly pleased with the treatment his players, coaches, and manager received in Riverside…." (*Riverside Daily Press,* 7-10-1936: 13)

The Solons returned to Evans Park in 1938. Unfortunately, the prospects of getting the Solons back for 1939 were dashed by the fact that Riverside had not kept up its part of the bargain to maintain the ballpark facilities. (*Riverside Daily Press,* 3-19-1938: 11) The loss of Minor League training and tryouts in 1939 apparently jolted the City into action. In late summer of 1939, the *Press* reported that a complete renovation of Evans Park had been completed. (*Riverside Daily Press,* 7-8-1939: 11)

In 1939 baseball great and future Major League color barrier breaker Jackie Robinson played at Evans Field. Reporting on the game, the *Riverside Daily Press* wrote: "At 1:30 o'clock the "Acme All-Stars", composed of Orange Belt Negro talent and headed by Pitcher Strickland of Riverside will take on the "Rockets". Jackie Robinson, Pasadena Jaycees great all-around athlete who is good enough to be Class AA baseball today, is the leading member of the Rockets. (*Riverside Daily Press,* 7-15-1939: 11)

The Depression years of the 1930s had been a landmark decade for baseball in Riverside, and Evans Park had played a central role. In a 1986 article for the *Riverside Press-Enterprise*, local historian Tom Patterson referred to the 1930s decade as a "golden age " in Riverside baseball. (*Riverside Press-Enterprise,* 4-13-1986: B-1)

World War II brought the Great Depression to an end and united Americans toward a common goal. But, it also created new pressures from which people needed relief. The war brought to Evans Park a new mix of baseball talent in the form of military teams made up of players

including minor and major leaguers who had been drafted or who had enlisted for military service. (*Riverside Daily Press,* 8-3-1942: 8) During World War II, Evans Park was a witness to integrated baseball for the first time in its history. Until Branch Rickey, Manager of the Brooklyn Dodgers in the 1940s, added Jackie Robinson to the Dodgers on October 23, 1945, professional and amateur baseball had been strictly segregated . Professional baseball had a separate Negro League for African American ball players. Amateur teams were also segregated throughout the United States. The baseball teams that played at Evans Park before the war were also segregated and Riverside newspapers referred to teams of African Americans as "colored" or "negro". (*Riverside Daily Press,* 12-12-1920: 6, 11-12-1921: 12, 6-11-1936: 19, 9-13-1938: 11, and 9-17-1938: 13)

World War II saw many Major League players exchanging their flannels for military uniforms. In 1943, Evans Field hosted the great Joe DiMaggio when March Field's baseball team played the Santa Ana Army Air Base team on which Pvt. Joe DiMaggio served as center fielder. (*Riverside Daily Press,* 4-29-1943: 13) DiMaggio returned to Evans Field for a rematch with March Field on June 24, 1943. A highlight of that game was a triple play by DiMaggio that occurred when he hit a ball 345-feet over Evans Park's left field fence. Interestingly, DiMaggio's home run was hit off a pitch from former Negro National League player Pvt. Joe Filmore. (*Riverside Daily Press,* 6-25-1943: 12)

After the War, Evans Park returned to its normal schedule of baseball. Adding a spark to the 1949 season was a Spring Training camp conducted by the Portland Beavers. Night Ball also continued to attract large crowds.

The 1950s saw a decline in the use of Evans Park for Night Ball. In 2006, Hal Durian, former history column writer for the *Press-Enterprise* wrote a short article about Evans Park's baseball history. In the article, he noted that the growing popularity of television reduced Evans Park as a centerpiece of Riverside sports entertainment. (*Press-Enterprise,* 4-9-2006: B-2) Nonetheless, famous baseball players continued to practice their craft at Evans Park, including Bobby Bonds, Luke Easter, and Dave Kingman (*Press-Enterprise,* 4-11-2005: C-2)

In 1955, the Riverside City Council approved the expenditure of $4,350 to expand the baseball facilities at Evans Park. Plans were also made to trade City owned property in the Tequesquite Arroyo adjacent to Poly High School, for land owned by the School District in Evans Park. (*Riverside Daily Press,* 4-27-1955: 26) The following year, the trade was consummated, and the former City owned land in the Tequesquite Arroyo became the site of today's Cutter Pool, on the Riverside Community College campus. (*Riverside Daily Press,* 10-9-1956: 1)

10. Historic Context - Hospital History of the Lower Hospital Campus

In the late 1960s and early 1970s, new federal regulations and shifts in medical insurance toward health maintenance organization (HMO) systems, placed serious burdens on the hospital's ability to fund its operations. In 1973, the Riverside Community Hospital Foundation was created to act as an independent fund-raising entity. Heading the effort was Colonel

FIGURE 33: RELATIVE POSITIONS OF LOWER CAMPUS HOSPITAL BUILDINGS

SOURCE: WWW.BING.COM/MAPS

Edward Butler, who immediately revealed that the hospital was some $240,000 short of the money needed operate. The foundation targeted money from wills, bequests, and appeals to other foundations to raise about half a million dollars a year. (Riverside Community Hospital 2000: 51)

In October of 1969, Riverside Community Hospital approached the City of Riverside with a proposal to trade Evans Park for another property on which to develop new ball diamonds. At that time, the City said it would consider parting with the 13.6-acre Evans Park property, but only if land suitable for replacement baseball fields could be secured. To meet this requirement, the hospital proceeded to acquire land west of Evans Park , then the site of the Dutch Dairy. By September of 1970, the hospital had succeeded in acquiring over 40-acres of the former dairy property situated between Palm and Tequesquite Avenues. (*Riverside Daily Press,* 6-7-1971: B-1)

In June of 1971, Riverside Community Hospital offered to trade its 40-plus-acres of former dairy property for the Evans Park land. (Ibid) In February of 1973, the City Council approved

the land swap. Due to neighbor opposition at the new site, the City ended up working with the University of California at Riverside to develop joint-use athletic fields on University owned land. Under a lease agreement between the hospital and the City of Riverside, the arroyo bottom land that would ultimately be dominated by Community Hospital facilities continued to include large areas devoted to Evans Park's historical ball fields. (*Riverside Daily Enterprise,* 3-30-1976: D-1) But baseball was not entirely evicted from the Tequesquite Arroyo. Today a small corner of the Tequesquite Arroyo west of Magnolia Avenue remains devoted to ball fields. These diamonds are operated under joint use agreement between the City of Riverside and Riverside City College.

The following is a summary of the hospital buildings that now occupy the lower hospital campus in the Tequesquite Arroyo: A map of these buildings may be found in Figure 33.

a. 1976 - Building N - Professional Office Building

Building N was the first penetration of the hospital into former Evans Athletic Park lands. At that time, the hospital was plagued by a lack of doctors' offices in near proximity to the hospital and a strategically placed building was needed to address this shortcoming. The Evans Park land swap cleared the way to build on the arroyo bottom and on February 7, 1975 the City issued a building permit for Building N.

Building N is a five-story rectangular office building with exterior walls consisting of a reinforced concrete framework infilled with concrete block. The building is recessed into the side of the Tequesquite Arroyo, allowing it to be situated very close to Building C, the Critical Care Tower, located on the bluff above Building N. Building C was built at a later date than Building N, however, so the original intent was to facilitate access between Building N and Building B, the present main bed tower. The position of the building allows ingress and egress from the first floor on the west and from the third floor on the east.

The first floor access is located at the arroyo bottom, where parking and access are relatively unconstructed compared to the more intensely developed part of the hospital campus on the bluff. This access point is primarily for the use of patients. The third floor door is situated at the level

FIGURE 34: BUILDING N - PROFESSIONAL OFFICE BLDG

SOURCE: WILKMAN HISTORICAL SERVICES

of the upper hospital campus and is primarily designed to facilitate travel by doctors between the hospital and their offices.

The building was built by J.D. Diffenbaugh Contractors and issued an occupancy permit on January 9, 1976. Designer of the building was prominent Riverside architect Clinton Marr. (Riverside Building Permit #23420)

FIGURE 35: BUILDING J - PARKING STRUCTURE

SOURCE: WILKMAN HISTORICAL SERVICES

b. 1986 - Building J - Parking Structure

By the 1980s the need for parking, both on the upper and the lower hospital campus lands was becoming critical. Two interconnecting reinforced concrete parking structures were built to serve this need. The Building J parking structure, completed in 1986, is an extension of the four-level Building I parking structure completed in 1983. While both structures are interconnected, Building J has its main access point from the lower hospital campus, while Building I has its main access point from the upper campus.

FIGURE 36: BUILDING K - CANCER TREATMENT

SOURCE: WILKMAN HISTORICAL SERVICES

c. 1987 - Building K - Cancer Treatment Center

In 1987, an additional building was completed in the lower hospital campus south of Building N. (Riverside Building Permit #41633) In 2002, this building was expanded and remodeled to accommodate the hospital's Cancer Treatment Center. (Riverside Building Permit #02-0046)

FIGURE 37: BUILDING M - WOMEN'S SERVICES

SOURCE: WILKMAN HISTORICAL SERVICES

d. c. 1995 - Building M - Women's Health Services

In the mid-1990s, the hospital bought an existing single-story commercial building at the southeast corner of Brockton Avenue and 14th Street. Originally built as a Vans shoe store in 1981, the hospital converted the stucco finished wood frame building to a Women's Services center.

FIGURE 38: BUILDING Q - RAINCROSS MEDICAL CENTER

SOURCE: WWW.BING.COM/MAPS

e. 1995 - Building Q - Raincross Medical Center

In 1995, Riverside Community Hospital advanced plans for another medical office building, this time at the south end of the arroyo adjacent to a residential neighborhood. Neighbors objected to the loss of habitat that would result from the building's

construction. The neighbor's concerns were addressed when the hospital offered to mitigate the impact of a new building on arroyo land by installing extensive landscaping. It also promised to employ residentially sensitive Spanish influenced architecture. (*Riverside Press-Enterprise,* 9-7-1995: B-1) Ultimately, the hospital's project was approved and the Raincross Medical Center building was constructed. (*Riverside Press-Enterprise,* 9-27-1995: B-3) A lawsuit filed by the opponents was settled out of court. (*Riverside Press-Enterprise,* 3-9-1996: B-1) With this action, the hospital had acquired the last of the arroyo bottom lands needed for hospital expansion.

FIGURE 39: BUILDING L - HOSPITAL STORAGE

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 40: BUILDING P - DOCTORS' OFFICES

SOURCE: PERKINS + WILL

f. 2002 - Building L - Hospital Storage

In 2002, the hospital bought another existing commercial building,this one situated south of the Women's Health Services building. Located at 4426 Brockton Avenue, this building was originally built in 1959 and subsequently occupied by a variety of retail and office uses. The hospital converted it into a storage facility. Because Building L is over 50-years-old, it is evaluated for historical significance later in this report.

g. 2013 - Building P - Medical Office Building

At the writing of this report, Building P, a medical office building, was under construction. As shown in the rendering in Figure 40, the proposed medical office building will be a three-story structure of contemporary design. It is intended to replace the doctors' offices lost from the demolition of Building N.

FIGURE 41: BUILDING O - PARKING

SOURCE: PERKINS + WILL

h. 2013 - Building O - Parking Structure

At the writing of this report, the five-level Building O parking structure was under construction. The plans specify it to be a reinforced concrete building of generally rectangular configuration. Figure 41 is a photo simulation of the building as it will appear when completed.

11. Criteria for Historic Designation

An important purpose of this report is to determine the degree to which historic resources would be impacted by the proposed Riverside Community Hospital Specific Plan. Before impacts can be evaluated, it is necessary to identify which improvements qualify for historical designation. Criteria for judging historical significance exist at the federal, state, and local levels and any individual criterion that is found to apply to a property will result in a finding of "appears eligible" for historic designation. The following is a summary of the criteria used at the federal, state, and local levels in determining eligibility for historic status.

a. National Register of Historic Places

According to the *Guidelines for Completing National Register Forms* (National Register Bulletin 16), National Register listing is intended for historic architecture, archaeology, engineering, or cultural entities that are expressed in a site, building, structure, district, or object. The National Register is not solely limited to entities with an importance at the national level, but is also applicable to resources at the local and state levels too. To qualify for National Register listing, a resource must meet one or more of the following criteria**:**

A. Associated with events which have made a significant contribution to the broad patterns of our history.
B. Associated with the lives of persons significant in our past.
C. Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possesses

high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.

D. Has yielded, or may be likely to yield, information important in prehistory or history.

But, it is not enough for a resource to meet one or more of the above criteria. It must also exhibit *integrity.* National Register Bulletin 15 defines integrity as "…the ability of a property to convey its significance." The following integrity criteria are used by the federal government:

- Location**:** The historic location of the property or event.
- Design**:** The historic form, layout, and style of the property.
- Setting**:** The physical context.
- Materials**:** The items that were placed in a specific time period/ configuration.
- Workmanship**:** The craftsmanship of the entity's creators.
- Feeling**:** The expression of the historic sense of a time period.
- Association**:** The link between a historic event/person and property.

Not all of the integrity criteria must be met for a resource to be eligible for listing. A resource must, however, retain enough integrity to convey its historic significance.

The National Register sets as a guideline that a resource should be 50 years old or older to be considered for listing. An allowance is, however, made for younger resources to qualify for listing provided they are of exceptional significance.

b. California Register of Historical Resources

The California Register criteria are very similar to the federal standards and are as follows:

1. Associated with events which have made a significant contribution to the broad patterns of local or regional history of the cultural heritage of California or the United States.
2. Associated with the lives of persons important to local, California, or national history.
3. Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.
4. Has yielded, or may be likely to yield, information important to the prehistory or history of the local area, California, or the nation.

California resources listed in the National Register of Historic Places are automatically listed in the California Register of Historic Resources.

The California Register does not specifically reference a "50 year rule". However, the California Environmental Quality Act (CEQA) states that *"In order to understand the historical importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resources."*

c. City of Riverside Historic Designations

The City of Riverside has two levels of individual historic designation, Cultural Heritage Landmark and Resource or Structure of Merit. The Landmark designation is the City's highest historic designation, while the Resource or Structure of Merit designation is for resources of a lower level of significance. The following are the criteria for these two types of resources as defined in the Cultural Resources Ordinance of the City of Riverside Municipal Code (Title 20, Ordinance 7108, 2010) as amended:

Cultural Heritage Landmark Criteria: "Landmark" means any Improvement or Natural Feature that is an exceptional example of a historical, archaeological, cultural, architectural, community, aesthetic or artistic heritage of the City, retains a high degree of integrity, and meets one or more of the following criteria:

1. Exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, architectural, or natural history;
2. Is identified with persons or events significant in local, state or national history;
3. Embodies distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;
4. Represents the work of a notable builder, designer, or architect, or important creative individual;
5. Embodies elements that possess high artistic values or represents a significant structural or architectural achievement or innovation;
6. Reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning, or cultural landscape;
7. Is one of the last remaining examples in the City, region, State, or nation possessing distinguishing characteristics of an architectural or historical type or specimen; or
8. Has yielded or may be likely to yield, information important in history or prehistory.

Resource or Structure of Merit Criteria: "Resource or Structure or Resource of Merit" means any Improvement or Natural Feature which contributes to the broader understanding of the historical, archaeological, cultural, architectural, community, aesthetic or artistic heritage of the City, retains sufficient integrity, and:

1. Has a unique location or singular physical characteristics or is a view or vista representing an established and familiar visual feature of a neighborhood community or of the City;

2. Is an example of a type of building which was once common but is now rare in its neighborhood, community or area;

3. Is connected with a business or use which was once common but is now rare;

4. A Cultural Resource that could be eligible under Landmark Criteria no longer exhibiting a high level of integrity, however, retaining sufficient integrity to convey significance under one or more of the Landmark Criteria;

5. Has yielded or may be likely to yield, information important in history or prehistory; or

6. An improvement or resource that no longer exhibits the high degree of integrity sufficient for Landmark designation, yet still retains sufficient integrity under one or more of the Landmark criteria to convey cultural resource significance as a Structure or Resource of Merit. (Ord. 7108 §1, 2010)

Historic District: The City of Riverside defines a Historic District as:

1. A concentration, linkage, or continuity of cultural resources, where at least fifty percent of the structures or elements retain significant historic integrity, (a "geographic Historic District") or

2. A thematically-related grouping of cultural resources which contribute to each other and are unified aesthetically by plan or physical development, and which have been designated or determined eligible for designation as a historic district by the Historic Preservation Officer, Board, or City Council, or is listed in the National Register of Historic Places or the California Register of Historical Resources, or is a California Historical Landmark or a California Point of Historical Interest (a "thematic Historic District").

In addition to either 1 or 2 above, the area also:

3. Exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, architectural, or natural history;

4. Is identified with persons or events significant in local, State, or national history;

5. Embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;

6. Represents the work of notable builders, designers, or architects;

7. Embodies a collection of elements of architectural design, detail, materials or craftsmanship that represent a significant structural or architectural achievement or innovation;

8. Reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning;

9. Conveys a sense of historic and architectural cohesiveness through its design, setting, materials, workmanship or association; or

10. Has yielded or may be likely to yield, information important in history or prehistory.

Contributors and Non-Contributors: Within a historic district, resources are identified as either "contributors" or "non-contributors". These are defined as follows:

"Contributor" to either a Historic District or a Neighborhood Conservation Area means
a building structure within a Historic District or Neighborhood Conservation Area that provides appropriate historic context, historic architecture, historic association or historic value, or is capable of yielding important information about the period. Contributors in Historic Districts and Neighborhood Conservation areas are subject to the Certificate of Appropriateness Process.

"Non-contributor" to either a Historic District or a Neighborhood Conservation Area means a building structure within a Historic District or Neighborhood Conservation Area that does not provides appropriate historic context, historic architecture, historic association or historic value, or is not capable of yielding important information about the period, because that building structure:

1. Was not present during the district's or area's period of historic significance; or

2. No longer possesses integrity due to alterations, disturbances, additions, or other changes; and

3. Does not independently meet the designation criteria as defined in this Title.

12. Historical Evaluations, Hospital Campus Buildings

National Register criteria suggest that buildings and other improvements are generally considered appropriate for evaluation when they reach an age of 50-years-old or older. Many governmental agencies, however, use 45-years-old or older as a basic benchmark so that buildings that are close to the 50-year age guideline are also evaluated. Even younger buildings can be subject to evaluation if they are deemed to be exceptional.

On the Riverside Community Hospital Campus, five buildings are subject to evaluation for historical significance. These consist of Buildings A, B, D, L and N. All but Building N are 50-years-old or older. The following subsections address each of these buildings, with each building examined in terms of historic context, architecture, and whether the building qualifies for historic designation. The following are the evaluations of these buildings as required by the California Environmental Quality Act:

a. Building A Historic Context

The historic context of Building A is thoroughly covered earlier in this report. Its location is identified in Figure 16. In summary, Building A is the oldest hospital building on the Riverside Community Hospital Campus. It was designed by prominent architect Myron Hunt in a Spanish Colonial Revival influenced motif. The first phase of construction was completed in 1925, and various additions and alterations were made to the building over time. Building A can be discerned in Figure 42 by its red tile roofs. Most of Building A, however, has been enveloped or obscured by later construction. The architectural descriptions below deals with only those parts of the building that are open to view today, and is keyed to the views identified in Figure 42.

FIGURE 42: KEY TO ELEVATION DESCRIPTIONS

SOURCE: CITY OF RIVERSIDE GIS SYSTEM

b. Building A Architectural Description

FIGURE 43: BUILDING A - DETAILS

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 44: BUILDING A - VIEW #1

SOURCE: WILKMAN HISTORICAL SERVICES

Building A is a single story poured in place, reinforced concrete structure with basement. The basement area that faces Magnolia Avenue is obscured by a mounded landscaped area and is not readily visible. The portion of the basement oriented toward 14th Street is partially above grade. Figure 43 shows some of the building's details. The gabled roof has a cross gable toward the easterly end of the building and a gable at its former entry. The roof is covered in red clay tiles and the eaves have exposed notched rafters and tongue and groove sheathing. Louvered attic vents appear in each gable end. Most of the windows are double-hung wood sash types, set deeply into the concrete walls. Most of the doors are newer solid core types lacking any design distinction. As noted above, only the most easterly portion of the building is open to view at this time, as the majority of the building has been obscured by or encased by later buildings. The

following description of those parts of the building that are visible progresses from the 14th Street side of the building around to the former front entry area oriented toward Magnolia Avenue.

FIGURE 45: BUILDING A - VIEW #2

SOURCE: WILKMAN HISTORICAL SERVICES

View 1: (Figure 44) This gabled elevation is in a mechanical and utility court area facing 14th Street. It exposes relatively plain concrete building walls with visual relief provided by window and door recesses, most of which have been filled in. A typical attic vent can be seen in the upper gable and a stucco covered chimney extends out of the roof. The varying grade exposes portions of the basement.

View 2: (Figure 45) The view to this area of the building is obscured by two modular buildings that were installed in 1985 (City Building Permit #34159) In Figure 45, these buildings can be seen in the image to the left. In the image to the right, one can see that the original building is visible behind the modular buildings. This elevation is characterized by an almost fully exposed basement level and wood framed double hung sash windows set deeply into the building's concrete walls.

View 3: (Figure 46) View #3 is similarly obscured by the placement of the above mentioned modular buildings. As with View #2, a portion of the original building wall is clearly visible, while the remainder of the wall is only visible by looking down the separation between Building A and an adjacent modular building. This elevation exposes a large portion of the basement level and is characterized by the wood framed

FIGURE 46: BUILDING A - VIEW #3

double hung sash windows that are typical of the balance of the building.

View 4: (Figure 47) View #4 is oriented directly toward the intersection of Magnolia Avenue and 14th Street. It is a gable end wall broken by windows typical of the balance of the building. A large part of the basement is exposed to view and a metal ramp with metal railing links the ground floor with the public sidewalk. A concrete stairway links the basement to the top of the mounded landscaped area.

FIGURE 47: BUILDING A - VIEW #4

SOURCE: WILKMAN HISTORICAL SERVICES

View 5: (Figure 48) Views 5, 6, and 7 are the most aesthetically pleasing elements of Building A. All of these frontages have a prominent visual presence behind a mounded lawn fronting Magnolia Avenue that is planted with a variety of trees. The most notable trees in this area are palm trees

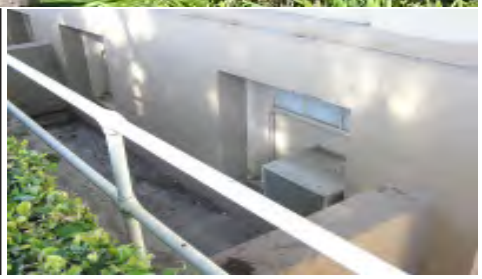


FIGURE 48: BUILDING A - VIEW #5

SOURCE: WILKMAN HISTORICAL SERVICES

donated to the hospital by respected palm tree authority and Riverside resident, J. Harrison Wright when the hospital was completed in 1925. (*Riverside Daily Press*, 5-13-1925) The basement element is not visible from the street in these views, however, nearer the building, basement windows can be seen in a recessed area. The details of this elevation are typical of the other elevations on the building, including double hung windows, wooden eaves with exposed notched rafters, and relatively smooth poured in place concrete walls. Some of the windows in the basement area have been altered to accommodate air conditioning units.

FIGURE 49: BUILDING A - VIEW #6

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 50: BUILDING A - VIEW #7

SOURCE: WILKMAN HISTORICAL SERVICES

View 6: (Figure 49)
View #6 is one of the other prime views revealing original fabric of the Myron Hunt design. In the right corner of this elevation is a raised area that extends as a gabled roof above the main roof line of the building, lending some added architectural interest to this corner of the building. The balance of this elevation is typical of the other elevations of the building, with double-hung sash windows dominating the overall composition.

View 7: (Figure 50) This is the last of the views with significant original integrity that is open to the view of the general public. It is a simple gabled wall with windows and attic vents typical of the rest of the building. Access is via a raised concrete platform flanked by a metal railing.

FIGURE 51: BUILDING A - VIEW #8

SOURCE: WILKMAN HISTORICAL SERVICES

View 8: (Figure 51) This view and View #9 are only visible from a courtyard that is behind Building H (Health Education Building) and a metal fence covered in a dense grille. It is not accessible to the general public. The concrete wall of View #8 is penetrated by several double hung wood sash windows. This building wall once served as the easterly flank of the original hospital entrance courtyard.

FIGURE 52: BUILDING A - VIEW #9

SOURCE: WILKMAN HISTORICAL SERVICES

View 9: (Figure 52) The final view covered in this architectural description is also within the Health Education Building's courtyard area, formerly part of the original hospital's landscaped entry. The easterly part of this elevation retains the integrity of the building as it existed in the 1950s; however, the gabled extension that once provided the main point of hospital access has been significantly altered. Formerly this gabled wall had a set of doors flanked by a pair of windows. In the upper part of the gable was an attic vent. All of these have been filled in and the overall wall has been covered in a rough textured stucco. Reminding the viewer of the former status of this area as a primary entry to the hospital, is a pair of carriage type lamps that once flanked the entry. Aluminum framed fixed glass windows have been installed in the altered area.

Landscape-Site Features: The only significant landscape feature left in relation to Building A is the palm dominated landscape at the southwest corner of Magnolia Avenue and Fourteenth Street. As noted earlier, this palm grove was donated by respected palm authority and Riverside resident J. Harrison Wright when the hospital was completed in 1925. All other landscape and site features have been altered or eliminated as the hospital has grown.

c. Building A Historic Significance

Due to issues with architectural integrity, Building A does not qualify for historical designation at any level. WHS has assigned a CHR Status Code of 6L to this building, reflecting its ineligibility for historical designation, but with a caveat. The 6L Status Code is defined as follows: *"Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning."* The "special consideration" factors are discussed at the end of this subsection.

In regard to integrity, while, Views 4, 5, 6, and 7 retain integrity, they represent only a relatively small segment of the original building. Further, while the 14th Street elevations retain integrity, they are blocked from view by modular structures and, in any event, represent only the former "back door" to the hospital. Another major element compromising the integrity of the original Myron Hunt building is the placement of the Health Education Building (Building H) within the hospital's original landscaped entry courtyard. This placement essentially eliminates this once prominent open space and blocks the view to this once important building facade. Further compromising the integrity of this part of the building is the alteration of the entry itself, including the elimination of the entry doors and flanking windows. Other parts of this once prominent front facade have been encapsulated within additions that have taken place in the past 80 years.

But, while Building A itself does not qualify for historical designation at any level, its landscaped setback at Fourteenth Street and Magnolia Avenue qualifies for local Landmark status as a cultural landscape, earning it a CHR Status codes of 5S3. (Appears to be individually eligible for local listing or designation through survey

evaluation) The criteria under which this landscape qualifies for historical designation are as follows:

Riverside Cultural Heritage Landmark Criteria:

1. Exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, architectural, or natural history;

2. Is identified with persons or events significant in local, state or national history;

4. Represents the work of a notable builder, designer, or architect, or important creative individual;

As noted earlier, the palm trees in this area were donated to the hospital by noted palm tree authority and Riverside resident J. Harrison Wright. (*Riverside Daily Press,* 5-13-1925) The placement of the palms at the corner was accomplished to balance with a grove of palms in Newman Park across Magnolia Avenue also donated by J. Harrison Wright. Figure 127 in the section on Newman Park later in this report includes a birds eye view showing both the palm grove in Newman Park and the palm grove in the corner setback of Riverside Community Hospital. Newman Park is a City of Riverside Cultural Heritage Landmark, a status that relates to its J. Harrison Wright donated palm grove and its WPA statue of Juan Bautista de Anza. The Riverside Community Hospital palm grove cultural landscape includes all trees and turf in the landscaped area extending from the north elevation of Building H to the parking lot at the southwest corner of Magnolia Avenue and Fourteenth Street.

The following additional information pertains to this cultural landscape:

- **Period of Significance:** 1925, the year the grove was planted.
- **Significance Theme:** Riverside Cultural Landscapes
- **Character Defining Features:**

  √ All palm trees.
  √ All other mature trees in the vicinity of the palm trees.
  √ The mounded turf area upon which the trees are planted.

Special Considerations in Planning: As noted above, Building A is assigned a CHR Status Code of 6L, signifying that while it does not qualify for historic designation, it is worthy of special consideration in the planning process. The mitigation measures at the end of this report suggest ways to create an appropriate interface between the palm grove and any future building at its edge. The mitigation measures also address the matter of interpreting the history of Building A in some meaningful way.

d. Building B Historic Context

The historic context of Building B is thoroughly covered earlier in this report. In summary, Building B represents the hospital's third major phase of growth, the first two being Building A and Building D. Building B also represents Riverside Community Hospital's first effort to become a major regional medical facility. The inception of Building B occurred in late 1961 when the hospital announced plans to build a new wing to accommodate the hospital's envisioned growth. The six-story building was designed by prominent Riverside architect Herman O. Ruhnau (Riverside Community Hospital 2000: 43) who was one of Riverside's most prolific architects and was responsible for scores of buildings, both within Riverside and beyond. Major public buildings designed by Ruhnau include the Riverside Community College Cosmetology Building (1957), the Public Defender's Office, 4200-4232 Orange Street (1958), Riverside Community College Cutter Swimming Pool Complex (1957) Press Enterprise Building, 3514 Fourteenth Street (1958), Marcy Branch Library, 3711 Central Avenue (1958), the Riverside Police Department Building, 4102 Orange Street (1965), and the Riverside County Law Library, 3535 Tenth Street (1969). (Christopher A. Joseph and Associates 2009: 27) Ground breaking for Building was held on April 22, 1964 and the building was completed in January of 1966 at a cost of $5.5 million. (*Riverside Press-Enterprise* 1-30-1966: A-7)

e. Building B Architectural Description

Building B is a 229,522 square foot, predominantly six-story, reinforced concrete building with basement. The flat roofed building's footprint assumes a prominent "V" shape, oriented toward a parking and receiving area in the southerly portion of the overall hospital site. The building assumes an overall horizontal stance, created by its prominent use of bands of windows, concrete awnings, and concrete spandrels.

Building B South Elevation: (Figure 53) The south elevation has the building's strongest horizontal character, created primarily by its precast concrete awnings that shade the building's windows and extend unbroken from one end of the building to the other. Spanning the distance between the awning fascias and the building are aluminum louvers that further enhance the shading effect of the awnings. Vertically, the building is divided into bays by the building's structural concrete framework. Each bay is topped by a band of aluminum framed windows, situated atop precast concrete infill panel. Mechanical equipment on the roof is screened by a parapet consisting of similar concrete infill panels, spanning the spaces between the building's vertical structural elements. Centered on the first floor, at the vertex of the building's "V" is a prominent folded plane precast concrete canopy, supported by round columns. (Figure 54) Below this canopy is a vestibule consisting of dark tinted windows framed in black anodized aluminum. This vestibule is a later addition and is not in character with the Mid-Century Modern style of the rest of the building.

Building B East Elevation: The east elevation (Figure 55) is dominated by two prominent elements. In the southerly part of this elevation, the awning elements of the

FIGURE 53: BUILDING B - SOUTH ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 54: BUILDING B - SOUTH ELEVATION ENTRY

south elevation transition into the division points of an exterior staircase that extends up the full length of the building. Added later to this staircase are infill panels consisting of vertical steel tubing, designed to create a security barrier for those using the staircase. Originally the staircase was secured only at its first landing, by a low iron fence consisting of vertical steel pickets punctuated by decorative square sheet metal panels. A remnant of this design element remains in the form of a pair of gates at the foot of the

stairs. (Figure 56) The northerly portion of west elevation consists of a solid reinforced concrete wall, broken only by scoring that extends the building's theme of horizontal and vertical design elements.

FIGURE 55: BUILDING B - EAST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

Building B North Elevation: The north elevation (Figure 57) is more varied than any of the other elevations. Like the south elevation, the prominent "V" footprint is apparent in this elevation, however, unlike the south elevation, it does not come to a point at the center. Rather the center is broken by a large vertical protrusion that houses elevators, interior stairways, mechanical equipment and the like. The building mass easterly of this protrusion is essentially a mirror image of the south elevation, consisting of horizontal awnings, windows, and infill panels between vertical structural elements. The building mass westerly of this center element has all of the design elements of the building wall easterly of the center element, with the exception of the precast concrete awnings. This side of the north elevation also extends a considerable distance to the north, stepping down from six, to three, to two stories as it extends north. The central protrusion is largely made up of reinforced concrete walls broken only by occasional windows, scoring, and some precast concrete balcony elements that mimic the awnings in the easterly plane of the north elevation.

FIGURE 56: BUILDING B - EAST ELEVATION IRON GATE

FIGURE 57: BUILDING B - NORTH ELEVATION

SOURCE: WWW.MAPS.GOOGLE.COM

Building B West Elevation: The west elevation is largely obscured by Building B's connection to Building C. To the extent that it is visible, it consists of nothing more than a solid reinforced concrete wall broken by vertical and horizontal scoring.

FIGURE 58: BUILDING B - ROCK WALL AND SEATING AREA

SOURCE: WILKMAN HISTORICAL SERVICES

Building B Landscape/Site Features: Building B is characterized by only three prominent landscaped elements. Most significant in this regard is the landscaped parking lot in front of the south elevation, the landscaped area to the east of the parking lot and building, and the walkways that extend through these areas and along the south face of the building. A dominant element of the landscape is the use of Lemon Scented Gum Eucalyptus trees, the tall willowy branches of which help to soften the mass of concrete and glass that compose the south building walls. Adding shade

and color to the landscape pallet are Coral and Magnolia trees. Seating and planter areas (Figure 58) associated with the concrete walkways are punctuated by low rock veneer walls.

f. Building B Historic Significance:

Building B was recently evaluated by Historic Resources Group (HRG) as part of the City's Modernism 2 historic resources survey. This evaluation found that Building B appears eligible for City of Riverside Cultural Heritage Landmark designation as well as for listing on the State Register of Historical Resources. These findings earned the building CHR Status codes of 5S3 and 3CS. The criteria under which the building qualifies for historical designation are as follows:

Riverside Cultural Heritage Landmark Criteria:

3. Embodies distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;

4. Represents the work of a notable builder, designer, or architect, or important creative individual;

State Register of Historical Resources Criteria:

3. Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.

In support of Building B's qualifications for the above criteria, the HRG report states that Building B "....is an excellent example of a Mid-Century Modern institutional building in Riverside, designed by significant local architect Herman Ruhnau (1912-2006). Mid-Century Modern is a term used to describe the evolution of the International Style after World War II. Mid-Century Modern architecture is more organic and less doctrinaire than the International Style, and it is characterized by more solid wall surfaces. Riverside Community Hospital exhibits significant character defining features of the style, including rectangular massing, clear expression of form, and horizontal bands of flush windows.

Only two alterations detract from the architectural integrity of Building B. One is the black anodized aluminum framed entry vestibule and the other is the enclosure of the exterior staircase with tubular steel bars. both of these alterations are reversible. Overall, the building retains excellent integrity, and these two deviations do not significantly detract from the building's integrity.

The following additional information pertains to this building:

- **Period of Significance:** 1966, the year the building was completed.
- **Significance Theme:** Modern Architecture and Architects of Modernism
- **Character Defining Features:**

  √ Concrete awnings with aluminum louvers
  √ Concrete structural elements, most prominently those dividing the building vertically
  √ Horizontal bands of clear anodized aluminum framed windows
  √ Waffle pattern concrete infill panels
  √ Extension of concrete awnings to following the pattern of the exterior staircase
  √ Scored concrete wall masses
  √ Folded plate entry canopy
  √ Rock veneer retaining and garden walls
  √ Lemon Scented Eucalyptus trees in the parking area.

g. Building D Historic Context

The historic context of Building D is thoroughly covered earlier in this report. Its location is identified in Figure 16. Here is a brief summary of Building Ds historic context. In1953, to meet these increased demand for hospital space and services, a three-year fund-raising campaign was initiated in to build a multi-story bed tower. The design commission was awarded to Jay Dewey Harnish of Ontario, California. The new 3-story Riverside Community Hospital building was designed to include a basement, and engineered to accommodate three additional floors. While an early design concept reflected a strong Spanish Colonial Revival influence, the final design had a decidedly International Modern appearance. Ground breaking took place on August 11, 1954. When completed, the approximately million dollar new building could accommodate 240 patients, and the building was never expanded to its full engineered capacity. Today, Building D is largely obscured by later construction.

h. Building D Architectural Description

Building D is a reinforced concrete building of International Modern architectural style. It is a simple generally rectangular three-story with basement building capped by a flat roof. The south end of the building includes a vertical projection to house elevator equipment and a small fourth floor area housing hospital functions is situated adjacent to the elevator tower. Figure 59 is a segment from the architect's rendering of the building drawn ca. 1955. Comparing the existing building to the rendering is useful in determining the degree to which the building retains architectural integrity.

Building D South Elevation: It is immediately apparent when viewing the south elevation of Building D, (Figure 60) that it has been significantly altered. This alteration consists of the addition of an enclosed corridor from Building B which completely eliminates the horizontal bands of windows that once gave this elevation its character.

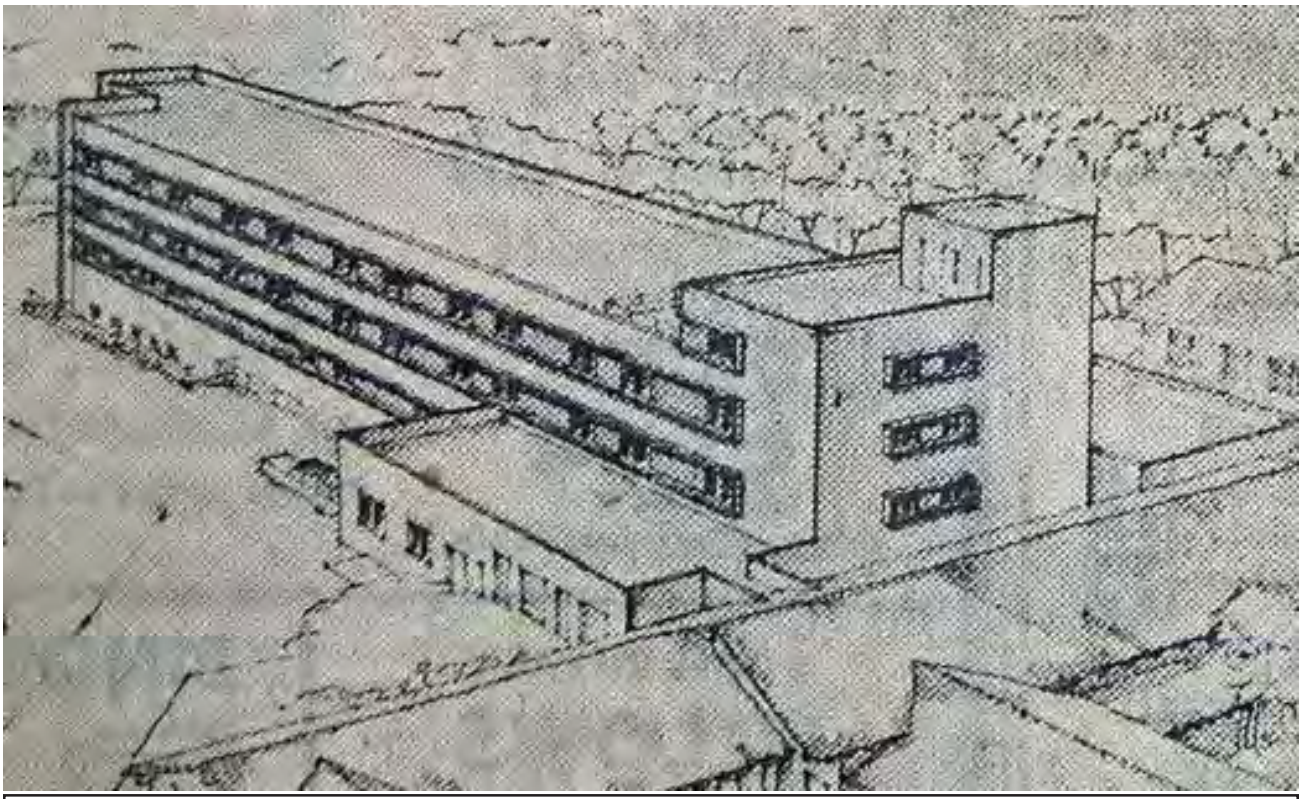


FIGURE 59: BUILDING D - ARCHITECT'S RENDERING - c.1955

SOURCE: *RIVERSIDE DAILY PRESS*, 9-21-1955

The corridor element is completely windowless, leaving this side of the building with a massive, monolithic appearance. This elevation is significantly obscured from view at the ground level by Buildings A and B, however, so the lack of design interest does not significantly impact the overall appearance of the hospital.

FIGURE 60: BUILDING D - SOUTH ELEVATION

SOURCE: WWW.MAPS.GOOGLE.COM

Building D East Elevation: The reinforced concrete wall of the east elevation (Figure 61) gains its character from its horizontal bands of metal framed windows situated within a linear concrete surrounds. The first floor of this elevation is completely blocked by an adjacent building. The east elevation's southerly end is punctuated by a two step raised area. One of these consists of the elevator equipment tower and the other consists of a small segment of fourth floor.

FIGURE 61: BUILDING D - EAST ELEVATION

SOURCE: WWW.MAPS.GOOGLE.COM

FIGURE 62: BLDG D - NORTH ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

Building D North Elevation: The north elevation (Figure 62) appears in two distinct steps. The most northerly of the steps houses an exterior staircase and is characterized by two simple vertically oriented openings that provide light and air to the two levels of the staircase at which they are situated. The other wall plane is situated to the south of the above described wall plane. On its west side, the staircase is exposed via two openings. Its southerly face is a large unbroken concrete wall that extends past the plane of the west elevation to form a wing wall. The first floor of this face of Building D is completely obscured by an adjacent building.

Building D West Elevation: Building D's west elevation (Figure 63) is identical to the east elevation, except the windows are shaded with slatted metal awnings. This additional element gives this side of the building a decidedly different appearance from

FIGURE 63: BLDG D - WEST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

the east elevation. Like the east elevation, the first floor of the west elevation is completely obscured by an adjacent building.

i. Building D Historic Significance

Due to issues with architectural integrity, Building D does not qualify for historic designation at any level. Significant integrity issues include the fact that all of the first floor elevations are obscured by other buildings and the fact that the south elevation is largely altered and obscured by the extension of an enclosed corridor from Building B.

j. Building L Historic Context

The area in which Building L is situated, was once a small commercial strip, extending along both sides of Brockton Avenue from Fourteenth Street to Tequesquite Avenue. Around 1908, the area was predominantly residential, however, over time it transitioned into a commercial strip. Figure 64 is a Sanborn Fire Insurance map showing the uses present in 1965. Other than two areas of residences, all of the uses on this map were commercial. In 1908, all of the uses on the map were residential with the exception of Chinatown and two laundry businesses that still remained in 1965. On the east side of Brockton Avenue in this area, the 1960 city directory lists Kathryn's Shop of Beauty (4408), E.J. Loustaunau residence (4414), State Farm Insurance (4420), P.L. Hunsaker Accounting (4422), Riverside Motor Supply (4426), Royal Laundry (4440), and Brockton Auto Repair (4468). Properties onn the west side of the street were a vacant building at 4407, the K.J. Pendergast residence (4413), D.B. Difani Accountant (4421), Elmer Lovins residence (4423), F.A. Watrous Cabinet Maker (4427), Russell Walling Cabinet Shop (4429), Acme /Tiny Tot Laundry (4435), a vacant building at 4443. Ed Martin's Garage (4449), Riverside Laundry & Dry Cleaners (4459), Bud & Harry's Service Station (4481), and Riverside City School Bus System (4489-91). Immediately

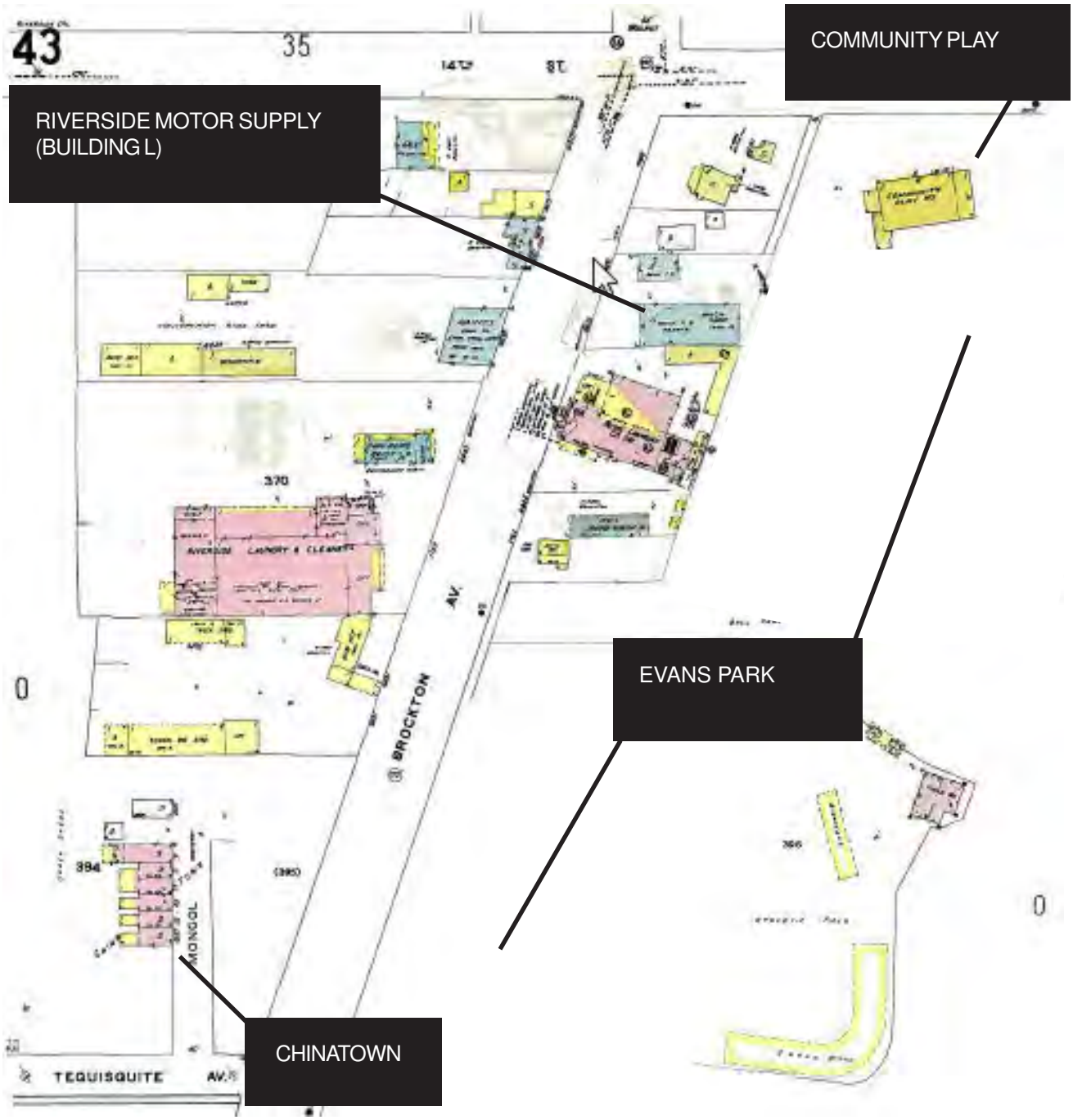


FIGURE 64: BROCKTON AVENUE COMMERCIAL STRIP - 1965 SANBORN MAP

SOURCE: SANBORN FIRE INSURANCE MAP - RIVERSIDE CITY PLANNING DIVISION

south of these latter businesses was Riverside's Chinatown which, by that time was a largely unoccupied "ghost town". Today, only remnants of this former business strip

remain. Most of the buildings on the west side of the street are vacant, with the notable exception of a Del Taco fast food restaurant at the southwest corner of Brockton Avenue and Fourteenth Street. and the Tri-Cities Laundry further to the south. On the east side of Brockton A venue, other than the hospital owned buildings, only two active commercial/office buildings remain.. These consist of the multi-tenant Community Medical Building and the Brockton Auto Clinic.

Building L is situated on Lot 5 of the B.S. Finch Subdivision, (Figure 31) recorded on March 12, 1903. Riverside County Assessor records for 1904 list the owner of Lot 5 as Francisco (Frank) Yslas Loustaunau. Mr Loustaunau also owned Lots 3 and 4. On Lot 4, he built his home. Later, his son, Edward built his home on Lot 3. With the exception of a minor structure with a County Assessor's valuation of $30 to $60 between 1924 and 1930, Lot 5 remained unimproved until 1959 when a commercial building was built there.

Frank Loustaunau was born in 1866 in Mexico. The 1910 Federal Census lists Mr. Loustaunau living at his Brockton Avenue address with his wife Paz, and daughter Stella. The 1920 Federal Census records the addition of Edward J. Loustaunau to the family, who was born in 1914. (California Birth Index) Federal Census records and city directories document that most of the Loustaunau family worked at the Royal Steam Laundry formerly situated immediately south of the subject property and currently the location of the Community Medical Building.

The three Loustaunau properties were transferred to Paz and and her two children in 1934, following the death of Frank. (Riverside County Assessor Rolls) In 1955, Edward J. and his wife Ellen became the owners of the subject property, which was vacant at that time. (Ibid)

On January 28, 1959, a building permit was issued to Edward Loustaunau for a 4,000 square foot commercial building, valued at $19,000. The permit did not list an architect; however, the contractor was listed as Renne Brothers. A final inspection of the building was completed on April 19, 1959. (Building Permit #33317)

The subject building was occupied by the Riverside Motor Supply auto parts store until ca. 1980, when the city directory shows the building split between Brockton Liquor and Deli at the front and Riverside Motor Machine Shop at the rear. Brockton Liquor and Deli was no longer listed in the city directory of 1991, leaving only Riverside Motor Supply Machine Shop as the building's occupant. The city directory of 1993 reflects the addition of Henry D. Schmitz, PhD as a second tenant in the building. The 1998 1999 city directories list only Dr. Schmitz as the building's tenant. These are the last directories examined by WHS. The building is now used for storage by Riverside Community Hospital.

k. Building L Architectural Description:

Building L is a generally rectangular concrete block building with a flat roof and unknown type of foundation. All concrete block used in the building is of the “precision” type, having a flat surface with no distinguishing characteristics. Figure 65 includes views of all the building’s visible elevations and the location of the building.

Building L West Elevation: The primary facade of Building L is its west facing elevation. This elevation is characterized by an 8” by 8” square concrete block wall pierced in the middle by clear anodized aluminum framed glass with an opaque coating. Above the storefront and concrete block wall is a stucco finished canopy with a fascia that appears to be 3 to 4 feet high. The fascia has a downward sloping angle of about 10 degrees. At the south end of this building wall is a concrete block wing wall that is the full depth of the fascia.

FIGURE 65: BLDG L - LOCATION AND ELEVATIONS

TOP LEFT: CURRENT AERIAL PHOTO
TOP RIGHT: EAST ELEVATION
BOTTOM LEFT: NORTH ELEVATION
BOTTOM RIGHT: EAST AND SOUTH ELEVATIONS

SOURCE: WILKMAN HISTORICAL SERVICES

Building L North Elevation: The north elevation consists of an 8” by 16” concrete block wall, the mass of which is broken only by a metal man-door and metal overhead garage door at the far east end. The canopy that tops the west elevation, wraps around to the north side a short distance (perhaps 20-feet) A wooden fascia board extends the full length of the balance of this building wall.

Building L East Elevation: The east is a plain 8” by 16” concrete block wall capped by a wooden fascia board.

Building L South Elevation: This elevation consists of a plain 8” by 16” concrete block wall capped by the metal flashing that extends over the edge of a short parapet.

l. Building L Historic Significance

Building L is a vernacular commercial building, very typical of the 1950s and 1960s. It lacks any architectural significance and is not associated with any persons or events important in history. Therefore it does not qualify for historical designation at any level and has been assigned a CHR Status Code of 6Z.

m. Building N Historic Context

The historic context of Building N is covered in detail earlier in this report. Here is a summary of that context: The first penetration of the arroyo bottom by the hospital occurred in the mid-1970s. At that time, the hospital was plagued by a lack of doctor’s offices in near proximity to the hospital. To answer this need a new five-story professional office building was designed, and on February 7, 1975 a building permit was issued for the building. The building was completed and issued an occupancy permit on January 9, 1976. Designer of the building was local architect Clinton Marr, with Riverside contractor J.D. Diffenbaugh handling construction. (Riverside Building Permit #23420)

n. Building N Architectural Description

This five-story office building has a rectangular floor plan and is situated on a concrete foundation. The building is capped with a flat roof flanked by a reinforced concrete parapet at its perimeter and a plaster finished mechanical penthouse in its center. The exterior walls consist of a reinforced concrete framework that forms a horizontally oriented rectangular grid. Infilling the spaces between the grid are nonstructural walls consisting of 8" by 16" split-face concrete block. Each end of each infill panel contains a bronze anodized aluminum framed fixed glass window with solid spandrel wainscot. The building is generally symmetrical, with all sides having essentially the same design.

The building is recessed into the side of the Tequesquite Arroyo, allowing it to be situated very close to Building C, the Critical Care Tower, located on the bluff above Building N. Building C was built at a later date than Building N, however, so the original

intent was to facilitate access between Building N and Building B, the present main bed tower. The position of the building allows ingress and egress from the first floor on the west and from the third floor on the east. The first floor access is located at the arroyo bottom, where parking and access are relatively unconstructed compared to the more intensely developed part of the hospital campus on the bluff. This access point is primarily for the use of patients. The third floor door is situated at the level of the upper hospital campus and is primarily designed to facilitate travel by doctors between the hospital and their offices. Both the first and third floor openings consist of dark bronze anodized

FIGURE 66: BUILDING N - BIRDS EYE VIEW

SOURCE: WWW.MAPS.GOOGLE.COM

FIGURE 67: BUILDING N - PARKING LOT VIEW

SOURCE: WILKMAN HISTORICAL SERVICES

aluminum framed storefront glass and glass doors.

FIGURE 68: BUILDING N - REAR ELEVATION AND WALKWAY

SOURCE: WILKMAN HISTORICAL SERVICES

Dense landscaping around all four sides of the building soften its edges and give it a park-like setting. Landscaping at the front of the building (west elevation) is situated in a curvilinear planter that introduce a sense of natural flow to the otherwise rectilinear nature of the building. On the north side of the building is a utility yard enclosed with split-face block concrete walls and used for outdoor storage and mechanical equipment. Vehicular access to this area is provided via a concrete driveway and metal gates. A wall at the north end of this space retains a landscaped slope leading up to a set of stairs and the Building G parking structure. The area beyond the building to the east is generally at grade with the top of the arroyo and is improved with a concrete walkway and densely landscaped planter areas. The slope below the walkway is partially retained by a concrete block wall above which is an engineered landscaped slope that extends up to a tubular rail that secures the edge concrete walkway. Pedestrian level light standards provide security lighting at regular intervals along the walkway railing. The area between the retaining wall and the east elevation building wall consists of a concrete lined swale designed to carry water away from the building. Another concrete swale is situated between the base of the slope and the top of the retaining wall to help control water in that area. Bridging the gap between the building and the walkway at the top of the slope is a concrete walkway flanked by concrete stem-walls that are topped by short tubular steel railings.

o. Building N Historic Significance

The terminology of Modern Architecture is still being defined and there is not complete agreement among architectural historians as to what names should be applied to the style variations within Modern Architecture. Using the City's Modernism Context Statement, this building would be classified as an example of Mid-Century Modern.

The criteria for National Register Listing specify that a property that has achieved significance within the past 50-years shall not be considered eligible for the National Register unless it is of exceptional importance. Neither the State Register, nor the City of Riverside's criteria for a cultural resource mention the 50-year benchmark; however, most agencies use 50-years as a general rule of thumb. The idea is that it takes time to have sufficient perspective to judge historical importance; but as noted above, there are no hard-and-fast rules on how much time is necessary to gain this perspective. The 1975 completion date of Building N would give it an age of approximately 38-years, and it could be argued that in the realm of Modern Architecture, a 38-year perspective should allow a reasonable conclusion to be reached regarding the potential historical importance of a building.

Determining the historical significance of a building is typically based on two broad criteria. First, was the building associated with any events or persons significant in history. And, second, is the building significant for its architecture or engineering.

WHS did not uncover any information that would suggest Building N was the location of significant events, or that it was associated with significant persons other than its architect, Clinton Marr. If it is to qualify for historical designation, then, its importance would need to be based on the significance of its architecture. Part of the consideration of architecture as a standard for designation is the architect with whom the building is associated. In the case of Building N, it is associated with one of Riverside's more significant architects, Clinton Marr. The next question is, whether this building is an exceptional example of Mr. Marr's works and/or if it is an exceptional example of its architectural style.

The information gathered in the preparation of the Modernism Context Statement included the following biographical information on Clinton Marr: Mr. Marr was born in Ontario, California in 1925, and grew up in Riverside, California. During World War II, he joined the Navy Air Corps and following his enlistment, enrolled in the University of Southern California's School of Architecture. Mr. Marr considered a career in aeronautical engineering; however, his desire for greater freedom of expression led him to choose the field of architecture. He took instruction from such accomplished architects as Quincy Jones, William Perriera, Gregory Hane, and Cal Strong. (Christopher A. Joseph and Associates 2009) During his studies, Mr. Marr developed an affinity for the principles of Modern Architecture, particularly the idea that a building's structure should be clearly expressed in its design and the philosophy that a building should complement its environment. He found these ideals expressed in the Japanese Garden House concept and learned to respect Frank Lloyd Wright, Quincy Jones, the Greene Brothers, and the German Bauhaus School. (Modernism Context Statement Clinton Marr Oral History Interview, 2009)

Mr. Marr enhanced his education by working part-time for Albert C. Martin and Associates in downtown Los Angeles. After his GI Bill funded education was completed in 1953, he went to work for Clare Henry Day in Redlands and then for

Herman Ruhnau in Riverside. In 1956, he opened his own architectural firm in Riverside, quickly gaining the attention of community leaders for his design abilities. Highly visible commissions, such as Wesley United Methodist Church in 1956 and the Lily Tulip industrial plant in 1958 enhanced his reputation as an innovative and creative architect capable of handling a wide range of design challenges. (Ibid) Mr. Marr's stature grew rapidly and he went on to design an impressive array of commercial, industrial, institutional, educational, and residential projects, both in Riverside and beyond. Notable designs completed by Mr. Marr include:

Wesley United Methodist Church, 5770 Arlington Avenue (1956)
Lily Tulip Cop Corporation, 800 Iowa Avenue (1958)
Standard Insurance Company, 3380 Fourteenth Street (1961)
The Marr Residence, 6816 Hawarden Drive (1961)
Provident Federal Savings and Loan, 3656 Central Avenue (1962)
Grace United Methodist Church, 1085 Linden Street (1966)
Riverside County Board of Education, 3939 Thirteenth Street
Riverside Municipal Airport Building, 6951 Flight Road (1968)

(Ibid)

During the Modernism Context Statement Oral History Interviews, Mr. Marr was asked to name some of what he considered to be his best works. He noted several buildings that particularly reflected his architectural creativity and philosophy. These included the Hemet and Riverside branches of Provident Bank, the Marr Residence, John North High School, George Washington Elementary School, and the Riverside Hall of Justice. Mr. Marr expressed particular affinity for the Hemet branch of Provident Bank, a commission he said offered considerable opportunities to express his design philosophies. (Modernism Context Statement Clinton Marr Oral History Interview, 2009)

WHS interviewed Clinton Marr on May 10, 2013 to learn more about Building N and to discuss its place in his overall architectural portfolio. Mr. Marr related that Building N was designed to solve a particular problem for the hospital. Doctors practicing at the hospital often had to commute from offices distant from the hospital campus. There was a need for a facility, where doctors could maintain an office space near the hospital. In this way doctors could access hospital resources for patient treatment, and use a nearby office space for business and clinical needs. (WHS-Marr Interview, 5-10-2013)

Mr. Marr explained that the building's design needed to satisfy two very important criteria. First, it needed to have convenient physician access to the hospital's main bed tower (Building B), while also providing convenient parking and access for patients. Second, it needed to have a flexible interior design that would accommodate a variety of office space sizes and layouts.

The solution to the first challenge was to build a multi-story building into the side of the arroyo with two points of ingress and egress. The primary patient access point was situated at the building's lower level, immediately adjacent to a large surface parking

FIGURE 69: PROVIDENT BANK, HEMET, CA.

SOURCE: WWW.MAPS.GOOGLE.COM

lot, easily accessible from Brockton Avenue and Fourteenth Street. Doctors would also use this access point, but more importantly the design included a third floor entry/exit point, at about the same level as the hospital bed tower on the bluff that would allow doctors to easily travel from their office space to the bed tower.

The solution to the interior design challenge was to create a building with a structural system concentrated at the building's perimeter, with windows strategically located to allow flexibility in office layout.

Another factor that influenced the design was security. Mr. Marr also noted that Building N was constructed at a time of civil unrest and building owners typically preferred building exteriors that would be damage resistant. The use of such substantial materials as reinforced concrete and concrete block helped satisfy this desire for security. Mr. Marr said he felt the design met all of these challenges and that the building has served the hospital's needs well for nearly 40-years. (Ibid)

Mr. Marr observed that building directly reflects his philosophy that a building's structure should be a prominent part of its design. And, the reinforced concrete framework of Building N is, in fact, a central part of its design. Mr. Marr noted that the concrete block infill between the reinforced concrete structure is not an essential part of the building's structural integrity, and should another infill material be desired in the future, including more glass, the building was designed to accommodate this without the need for

significant additional engineering. Mr. Marr said he considered other infill materials besides the concrete block that was used, but the block seemed to be well suited to the purpose of the building and the need to have flexibility in the layout of its interiors. (Ibid)

Mr. Marr referred to Building N as a "straightforward building" that made use of concrete for its structure and clearly expressed that in its design. He said he believed it to be a "good building" that solved the problems presented to him by the hospital. He noted, however, that other building commissions have given him a greater opportunity to express his creativity. He felt one of the best examples of this can be found in the Provident Bank building at 1690 East Florida Avenue in Hemet. This one-story building strongly expresses its structure in the building's design and does so in a variety of ways. The exterior structure is expressed in reinforced concrete columns and a two-tier roof system with bold fascias on both levels and clerestory windows in the upper tier. the ceiling features a waffle pattern concrete design that accommodates lighting and mechanical systems in a manner that is functional , structural, and aesthetic. The building presents itself in various planes and its perimeter walkway gives it the appearance that it is floating above the site. (Ibid)

In Riverside, Mr. Marr made reference to the Standard Insurance Building (now occupied by Riverside County Schools) at the southeast corner of Olivewood Avenue and Fourteenth Street. (Figure 69) Like the Hemet bank, this multi-story building clearly expresses its structure in the building's design and does so with a sense of depth and dimensional variety not found in Building N. Also, like the Hemet building, the Standard Insurance building seems to hover over its site in a most graceful fashion. (Ibid)

Another Riverside example referred to by Mr. Marr is the Riverside County Office of Education building at 3939 Thirteenth Street, on the north side of Thirteenth Street, between Almond and Chestnut Streets. It is another example of a building that expresses its reinforced concrete structure externally, but unlike Building N, it offers more depth and variety in its design. (Ibid)

There is no question that Building N was designed by a significant architect of the Modern era. The portfolio of Clinton Marr designed buildings both within Riverside and beyond is impressive. So the next question to be answered is whether Building N is among Mr. Marr's more significant works. And, within that realm, the question is whether it is among the most significant of this building's type within the realm of Mr. Marr's portfolio.

The most distinctive characteristic of Building N is that its design is centered on its structure. In this case, the building's structure is reinforced concrete and this material is clearly dominant in the building's architecture. WHS believes that, while Building N is a competently designed and functionally efficient building, it is not among the most creative examples of Clinton Marr's use of reinforced concrete as a central structural and design element. In the City of Riverside, at least two other buildings are better examples of a Marr designed building with an exposed concrete structural design

FIGURE 70: STANDARD INSURANCE BUILDING (ABOVE) AND RIVERSIDE COUNTY OFFICE OF EDUCATION BUILDING (BELOW)

SOURCES: ABOVE: UNDATED PROMOTIONAL BROCHURE, BELOW: WWW.MAPS.GOOGLE.COM

focus. The two buildings referred to are the Standard Insurance Building and the County Office of Education Building described and displayed above.

Accordingly, WHS has determined that Building N does not qualify for historic designation at any level and is therefore assigned a 6Z CHR Status Code. (Found ineligible for NR, CR, or Local designation through survey evaluation.) Building N is, therefore, not a historic resource for purposes of CEQA.

13. Historic Evaluation - Riverside Community Players, 4026 Fourteenth Street

a. Community Players Historic Context

The current Community Players property and properties to its south have a very colorful early history that begins with their use for farming and progresses to a rich sports-related history, largely centered around baseball. The information provided here is only a brief summary of that history. For a thorough examination of history of the theater property prior to its development as a theater, the reader is referred to a report completed by WHS in January of 2013, entitled *Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Cultural Resources Impacts Report.* (WHS 2013) An extensive summary of the early history of the subject property and adjacent properties may also be found in the current report in Section 9, Historic Context - Pre-Hospital History of the Lower Hospital Campus.

The Community Players property was originally a portion of Riverside Colony Farm Lot 6 of the original subdivision map that gave order to the Riverside Colony in 1871. The Colony's Farm Lots were intended to serve as agricultural lands to help support the Colony's economic base and to help fulfill the daily needs of life in the urban core of Riverside, known as the "Mile Square."

Assessor records for the years 1892 through 1903 indicate that a portion of Colony Farm Lot 6 coupled with all or portions of adjacent farm lots 7, 155, and 156 were owned by Mrs. Berta S. Finch. In 1903, Mrs. Finch recorded the B.S. Finch Tract, the division of portions of Farm Lots 6 and 7 into 26 town lots. (Figure 31) The B.S. Finch tract was situated immediately west of the Community Players property. Mrs. Finch farmed most of her property and also lived in a house likely located somewhere south of the existing Community Players lot.

In the early 1900s, the subject property, along with other adjacent farms in the arroyo bottom, were redeveloped as athletic fields. Donated to the City of Riverside by Samuel Evans Jr. in 1906, Evans Athletic Park, as it became known, was Riverside's central venue for numerous significant sports competitions spanning the following eight decades.

The founding of the Community Players occurred in 1925, under the leadership of two persons with backgrounds in the theater arts. Janet Scott and James Coleman Scott (no relation) organized the presentation of four programs of one-act plays and one three-act play under the auspices of the Riverside Women's Club. At that time, the group was known as the Players Group of the Drama Department of the Women's

Club. Encouraged by the success of the plays presented via the Women's Club, Janet and James Scott decided in 1926 to form their own theater group. (Riverside Community Players 1975)

At its first general meeting, Janet Scott was selected to be the group's Director and Joseph Sheldon Long was selected to be Chairman. Within a short time, James Coleman Scott replaced Mr. Long as Chairman. (Ibid)

The group's first venue as an independent theater association was the Loring Opera House located on the north side of Seventh Street (now Mission Inn Avenue) between Main and Market Streets, in downtown Riverside. Also, during that first season, eight workshop programs of one-act plays were performed in Miss. Scott's one-room studio. Lacking a formal stage, the plays were conducted on the floor of the studio, with the audience sitting cross-legged. (Ibid)

While the group's plays were successful, the Players did not find immediate success with a venue for its productions. The Loring provided an excellent facility for the Players' performances during its first two seasons; however, access to the theater was interrupted by a stagehand strike during the second season. This necessitated a temporary move to Poly High School, where three productions were performed before returning to the Loring. (Ibid) In 1928, however, the Loring was lost as a venue, when it was converted to a motion picture theater. This forced a temporary move to Central Junior High School.

FIGURE 71: JANET SCOTT AND JAMES COLEMAN SCOTT

SOURCE: *RIVERSIDE COMMUNITY PLAYERS, 1926-1975*

FIGURE 72: LORING OPERA HOUSE - c. 1927

SOURCE: *THEN & NOW RIVERSIDE,* Glenn Freeman, 2009

Feeling the need for a permanent facility, the Community Players launched a fund-raising campaign in 1929, amassing over $4,000 from more than 400 donors. With these funds, the group purchased the unused Washington School building at the

southwest corner of Twelfth and Almond Streets. But the group was only able to secure title to the building; the land remained the property of the Board of Education. (Ibid)

With assistance from the Kiwanis Club, the school house was remodeled into a 224-seat theater. In May of 1930, the extensively remodeled building was opened with a production of "The Queen's Husband". Players founder Janet Scott performed a star role in the play, but left for Hollywood at the end of the 1931-1932 season to pursue a career as a leading performer on dramatic radio programs. (Ibid)

The Washington School venue, served the Players for a 20-year period, during which the Players weathered two significant storms. The first was the Great Depression that saw audience attendance plummet. And, the second was World War Two, which sent many prospective actors into war-related duties. To overcome the first, the Players remained resolute in their determination to persist regardless of the diminishment of audience numbers. During the second crisis, the group tapped into the mobile talent pools of the nearby military bases, ferrying volunteer actors to and from their duty stations. (*Riverside Daily Enterprise,* 7-3-1974)

FIGURE 73: WASHINGTON SCHOOL LOCATION - c. 1930

TOP: EARLY IN REMODEL EFFORT
BOTTOM: REMODEL COMPLETED

SOURCE: *RIVERSIDE DAILY PRESS*, 9-30-1942

In 1950, the Players were again faced with the necessity of moving, when the land owning Riverside Board of Education announced that it would soon need the property

for a parking lot to serve its nearby offices. (Ibid) Saving the day was City Recreation Director Edith D'Elsicu, who orchestrated the construction of the "Playbox Theater" in an unused room of the Park & Recreation Department Administration Building. The beautiful Mission Revival style structure had formerly served as the Girl's High School. Sadly, after serving the Players' needs for only two seasons, the City chose to demolish this building to provide more parking downtown. Once again, the Players were looking for a new home.

FIGURE 74: GIRL'S HIGH SCHOOL, LATER PARK & RECRECATION ADMINISTRATION BUILDING

SOURCE: POST CARD, DATED 1908

From the Girls' High School, the theater group made a short one-year stop at the Riverside Junior College stage to continue its productions uninterrupted. (*Riverside Press Enterprise,* 11-27-1994)

While bridging the gap at Riverside Junior College, the Players engaged in a fund-raising campaign to pay for the erection of a purpose-built theater at 4026 Fourteenth Street, the current location of the Players' theater. Once again, however, the Players would own only the building but not the land. The land was an unused part of the Evans Athletic Park and was owned by the Riverside Board of Education. When arrangements were made to build a theater there, the land was being leased by the City of Riverside for a token amount of $1.00 per year. The City, in turn, entered into a 40-year sublease with the Community Players for the same token amount. (*Riverside Daily Press,* 6-10-1953)

Herman Ruhnau provided drawings for the theater and construction was handled by Rooth and Carr.

As noted earlier in this report in relation to the discussion of his design of the existing Hospital Bed Tower (Building B), Ruhnau is recognized in the City of Riverside's Modernism Context Statement as one of Riverside's most prominent architects. The

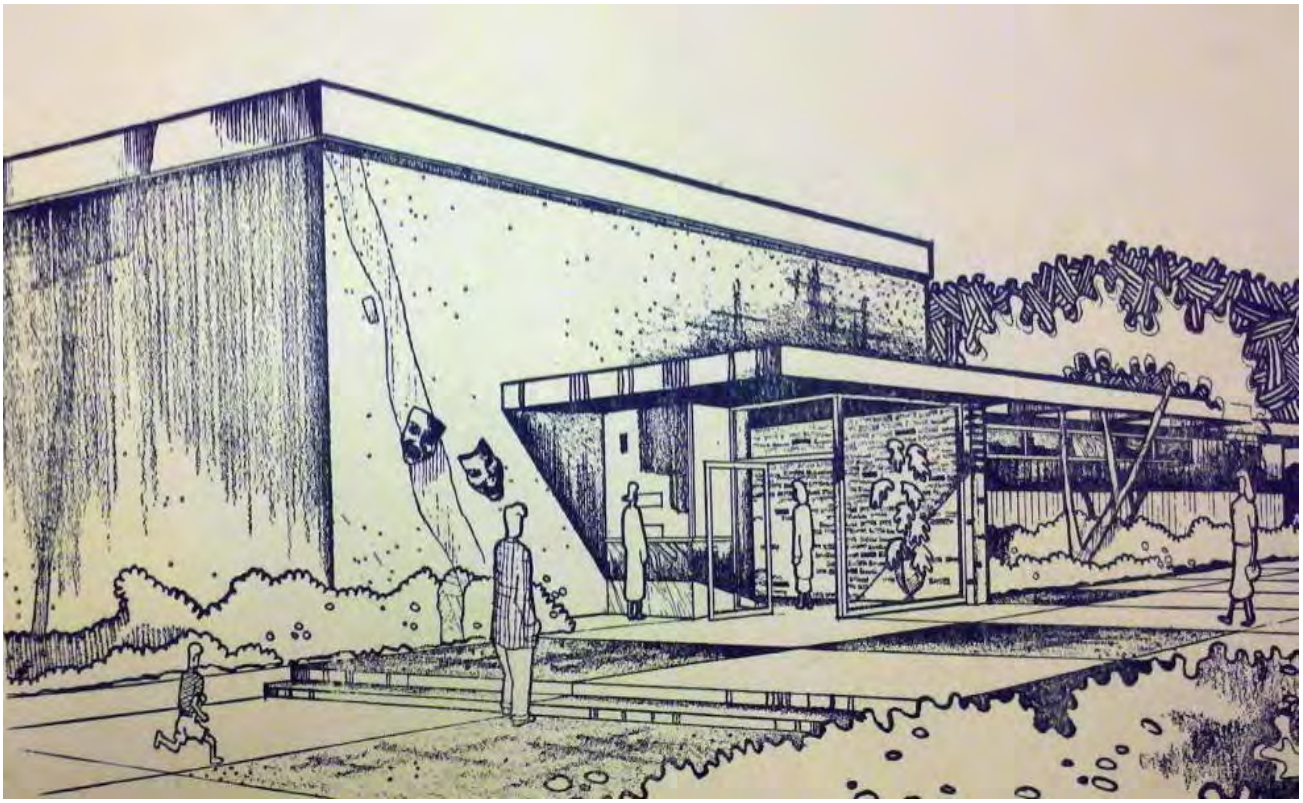


FIGURE 75: RENDERING OF THE COMMUNITY PLAYERS PLAYHOUSE

SOURCE: *RIVERSIDE DAILY PRESS,* 7-29-1953

following is a summary of the biographical information provided in greater detail in the Building B evaluation.

Ruhnau was born in Pasadena, California on September 1, 1912, but spent the better part of his youth in Santa Barbara. In 1929, Herman and his family moved to Riverside, where Ruhnau completed high school and went on to attend classes at Riverside Junior College. Ruhnau got his architectural training from the University of Southern California and subsequently worked for several well-known architectural firms. During World War II he was an architect for the U.S. Navy's Bureau of Yards and Docks. (Paul 1954: 466) In 1946, Ruhnau opened a Riverside branch office for Los Angeles based architectural firm of Heitschmidt and Matcham, and in 1950, he opened his own architectural firm in Riverside. (Christopher A. Joseph and Associates 2009: 27)

Among the significant Riverside projects for which Ruhnau's firm was responsible are the following:

- RCC Cosmetology Building (1957)
- Public Defender's Office, 4200-32 Orange St (1958)
- RCC Cutter Pool Complex (1957)
- Press Enterprise Building, 3514 14th St (1958)
- Marcy Library, 3711 Central Ave (1958)
- John Adams School, 8362 Colorado Ave (1958)
- UCR Entomology Building (1960)
- Community Hosp Bed Tower, 4445 Magnolia Ave (1966)
- UCR Health Services (1961)
- Riverside Police Department, 4102 Orange St (1965)
- Riverside County Law Library, 3535 Tenth Street (1969)
- La Sierra High School, 4145 La Sierra Avenue (1969)

(Ibid)

The Community Players building was designed to accommodate a "theater in the round" format with a stage located on the building's floor and seats arranged arena style around the entire stage perimeter. Ben Lewis, Players President in 1953, and Mayor of the City of Riverside, told the *Riverside Daily Press* that the theater had been designed so it could be converted at a later date to a conventional proscenium-arch style theater, with separate stage and curtain, subject to available funds. (*Riverside Daily Press,* 6-10-1953) And, indeed, current Community Players President, Katheryn Gage found plans depicting the alteration of the theater to a thrust stage arrangement.

Groundbreaking for the theater occurred on August 17, 1953, (*Riverside Daily Press,* 8-18-1953) and the new playhouse was dedicated on October 16, 1953 with a production of "Goodbye Again". Reporter Beth Teters noted that the acoustics were excellent and the view to the performance was unobstructed. (*Riverside Daily Press,* 10-17-1953) The total cost of the original building was $17,500. Building permit records document that additions were made to the building in 1956, 1958, 1961, and

FIGURE 76: COMMUNITY PLAYERS THEATER INTERIOR

SOURCE: HTTP://WWW.RIVERSIDECOMMUNITYPLAYERS.COM/

1962, but these records do not appear to be complete as it appears the building was altered more than four times. While it is not clear from the permits exactly what was added with each permit, Ms. Gage noted that the additions included dressing rooms, a workroom/storage space (named for Mayor Ben Lewis), and improvements to the snack bar. A "green room" (a space for actors preparing to go on stage) was also among the additions. Ms. Gage noted that when the Players' patio was completed in 1967, segments of patio slab were offered to donors, who could inscribe messages of their choice. Many of the inscriptions in the patio slab help tell the history of the Players. Messages dated well after 1967, suggest this method of fund raising was used later as well.

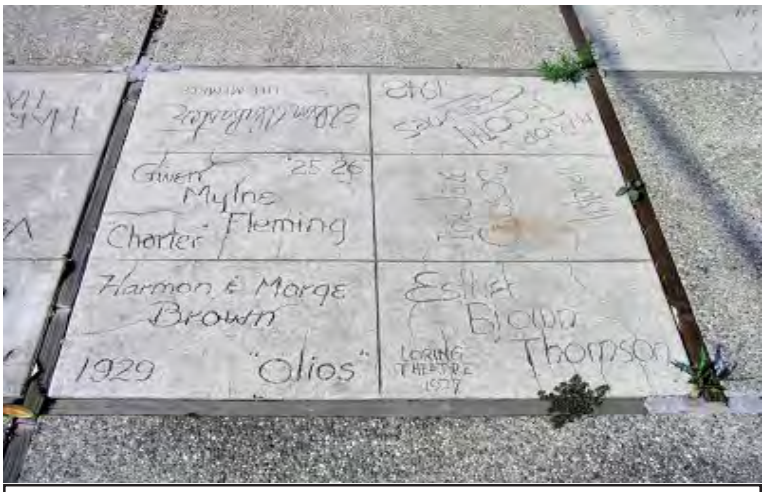


FIGURE 77: PLAYERS PATIO INSCRIPTIONS

SOURCE: WILKMAN HISTORICAL SERVICES

By the mid-1970s, the land on which the Players' building stood changed hands from the City of Riverside to Riverside Community Hospital. The hospital gained title to the land via a 1970s era land trade with the City of Riverside in which the Evans Athletic Park lands were swapped for 40-plus-acres of former dairy property to the west between Tequesquite and Palm Avenues. (*Riverside Daily Enterprise,* 3-30-1976: D-1) In 1989, the hospital notified the players that in 1993, the year the Players lease was scheduled to expire, there would be no lease extension, as the hospital felt the land would be needed for its rapidly expanding campus. In 1993, the Players formed an advisory board to find a new location, raise funds for needed building improvements, and coordinate the anticipated move. The board was modeled after the advisory board created to foster the Players move to the Fourteenth Street site in the early 1950s. (*Riverside Press Enterprise,* 2-8-1993)

To help assure a smooth transition, the hospital allowed the Players to remain in the Fourteenth Street playhouse on a season-to-season basis beyond 1993, as long as the group showed that it was serious in searching for a replacement for its 198-seat theater. By early 1993 feasibility studies had been completed, examining three alternatives sites. One potential site was the old Imperial Hardware building on the east side of Main Street, between University and Mission Inn Avenues. Another potential site was located in the Tequesquite Arroyo behind the All Saints Episcopal Church northwest of Magnolia Avenue and Terracina Drive. The final site examined was the old

Barker Brothers Furniture store at the southwest corner of Central and De Anza Avenues. It was the goal of the Players to create a 300-seat theater with a "flexible thrust stage", climate control, and computer controlled audio and visual systems (Ibid) The group favored the Imperial Hardware location, but the near $1 million needed to do a seismic retrofit proved a serious stumbling block. (*Riverside Press Enterprise,* 1-12-1994) The arroyo location presented the problem of improving an access road to the isolated property.

In 1995, the Players' search for a new home came to a happy ending, when Riverside Community Hospital agreed to sell to the Players the Fourteenth Street property on which the existing theater was located. The sale was consummated on October 4,1995 at the playhouse. Commenting on the event, Michael Charles, head of the Players' building search committee remarked: "This is the most exciting moment...in my 30-odd years as a member. We're finally having a home; after 70-years, we have a piece of land." The deal included $300,000 of Community Players cash, $142,000 in roadway improvements by the City of Riverside, and $50,000 for exterior theater improvements from the City of Riverside Redevelopment Agency. (*Riverside Press Enterprise,* 10-5-1995)

b. Community Players Architectural Description

As originally designed, the Riverside Community Players' building was a simple but elegant example of Modern architecture by renowned local architect Herman O. Ruhnau. Over the years, however, the building has been compromised by a series of unsympathetic additions that have detracted from its original design. The descriptions below, will attempt to distinguish those aspects of the building that are original or compatible to the original design, from those that are not. Figure 78 distinguishes the original building from its additions.

FIGURE 78: RIVERSIDE COMMUNITY PLAYERS - CURRENT AERIAL PHOTO

SOURCE: WWW.MAPS.GOOGLE.COM

The Players' building is a generally rectangular structure situated on a concrete slab foundation. Two types of roofs

are evident. The original building had a flat roof situated behind a parapet wall, while later additions, primarily to the south and east sides of the building are characterized by shed roofs sheathed in composition shingles. A small added canopy that wraps from the west to the north elevations has a flat roof in character with the original building. Unless otherwise noted, all exterior walls are sheathed with smooth texture stucco The parapet wall of the original flat-roof building and the edges of all flat roofed canopies are capped by wide sheet metal clad metal fascias. All windows and glass doors are guarded with wrought iron security grills, none of which appear to be original to the building.

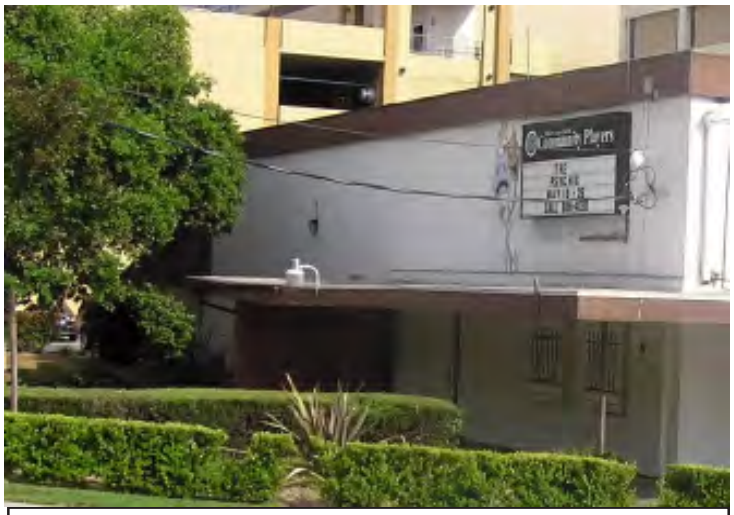


FIGURE 79: NORTH ELEVATION - RIVERSIDE COMMUNITY PLAYERS

SOURCE: WILKMAN HISTORICAL SERVICES

Community Players North Elevation: The north elevation (facing Fourteenth Street) is largely dominated by the relatively plain stucco wall of the original theater "arena box". At the west end, this wall mass is broken by a canopy that is a compatible extension of the original canopy on the west elevation. Like the west elevation canopy, the extension is faced with a sheet metal clad fascia and terminates at a stack bond brick wing wall. Above the canopy is a marquee sign flanked to the east by a comedy-tragedy theater mask image. Two pop-outs from the westerly end of the building accommodate openings into the snack bar. These openings are secured with metal bars and closed off with wooden doors. To the east of these openings is a single wooden man-door that allows theater patrons to access a large patio area during intermissions. The north end of a later shed-roof addition is visible at the east end of this side of the building.

Community Players West Elevation: The west elevation is largely dominated by the theater's arena box, split horizontally by a flat roofed canopy, the center portion of which is part of the original building's design. The upper part of this wall serves as a location for a Community Players sign situated on the fascia at the top of the parapet and a Community Players logo situated on the stucco wall below. Toward the east end of this wall is a door that was once used to access the theater control room. Players President Katheryn Gage told WHS that the theater did not at first have a stairway to the control room. At that time, access to this room was provided via an ladder leading to the above mentioned door.

FIGURE 80: WEST ELEVATION - RIVERSIDE COMMUNITY PLAYERS

SOURCE: WILKMAN HISTORICAL SERVICES

Below the canopy in the northerly portion of this elevation is a ticket sales projection along with the entrance to the theater. The rendering of the original design does not show the ticket sales projection as currently configured and President Gage told WHS that long-term members related that this improvement was added later. It is nonetheless in character with the original building design. The ticket sales projection is characterized by clear anodized aluminum windows situated atop a wainscot finished with tongue and groove vertical wood siding. The ticket counter is covered in salmon colored Formica.

The theater's entry foyer, a part of the original building design, is clad in wood framed fixed glass on the west and north, and anchored by a stacked bond brick wing wall to the south. A clear anodized aluminum storefront door provides access to the entry foyer from the north.

To the south of the wing wall is a building extension clad in vertical tongue and groove wood at the top of which is a band of clerestory wood framed corrugated frosted glass windows that open hopper style from the inside. The area corresponding to the first three clerestory windows south of the wing wall is equipped with a canopy that is open to the air above. The Ruhnau rendering depicts this open canopy as a place through which to grow lacy vertical plant materials. Further to the south, the roof abruptly changes to a composition shingle clad shed roof that is a later addition.

Community Players South Elevation: The south elevation is largely dominated by a shed-roof addition that is unsympathetic to the original Ruhnau design. A relatively small part of the original theater arena box is visible at the top, with its wide fascia capped parapet on which a Community Players sign is mounted.

Below the shed roof at the far west end, is a return of the vertical tongue and groove wood wall from the west elevation that is a part of the original design. This terminates in a plain smooth textured stucco wall that appears to be associated with the shed roof.

FIGURE 81: SOUTH ELEVATION - RIVERSIDE COMMUNITY PLAYERS

SOURCE: WILKMAN HISTORICAL SERVICES

At its west end, this wall is penetrated by a pair of wooden doors accessed via concrete stairs that are flanked by wrought iron railings. To the east of this pair of doors are two pairs of vertically oriented rectangular aluminum framed windows with frosted glass and iron security grilles. Some of the windows have slider elements at the top and some have been modified to accommodate window air conditioners. Between each pair of windows is a single wooden door accessed via concrete stairs flanked by wrought iron railings. At the far east end of this elevation, the building wall changes to vertical T-1-11 plywood, penetrated by a door that is also clad in this material. A stack bond concrete block wainscot east of this door suggests this part of the building may have at one time been an open patio.

Community Players East Elevation: The east elevation is essentially the "back door" to the theater. It was a later addition to the theater and its shed roof buts up to the original theater arena box. At the south end of this elevation is a stacked bond wainscot above which is T-1-11 plywood paneling. As noted above, this area may have been an open patio at one time. The balance of the wall is smooth stucco penetrated by a pair of solid wood doors leading to the Ben Lewis storage/workshop room Attached to the north end of

FIGURE 82: EAST ELEVATION - RIVERSIDE COMMUNITY PLAYERS

SOURCE: WILKMAN HISTORICAL SERVICES

this elevation is a barbed wire topped chain link fenced enclosure used for storage.

Site/Landscape Features: The overall improvements of the Community Players site can be seen in Figure 83. Foundation planters soften the view to the building's south and west sides and the area between the building and Fourteenth Street setback is improved with a large concrete patio (Figure 84) complete with seating and a fire pit. Lush landscaping fills in the balance of the front setback..

The patio records some of the history of the theater group through inscriptions, handprints, and footprints impressed into segments of the patio's concrete slab. As noted earlier many of these inscriptions were created in association with a fund raiser held in 1967.

c. Community Players Historic Significance

The Riverside Community Players theater appears to be eligible for designation as a City of Riverside Structure of Merit, earning it a CHR Status Code of 5S3. (Appears to be individually eligible for local listing or designation through survey evaluation) It does not appear eligible, however, for local Landmark designation or listing on either the State Register of Historical Re-

FIGURE 83: RIVERSIDE COMMUNITY PLAYERS - OVERALL SITE IMPROVEMENTS

SOURCE: WWW.MAPS.GOOGLE.COM

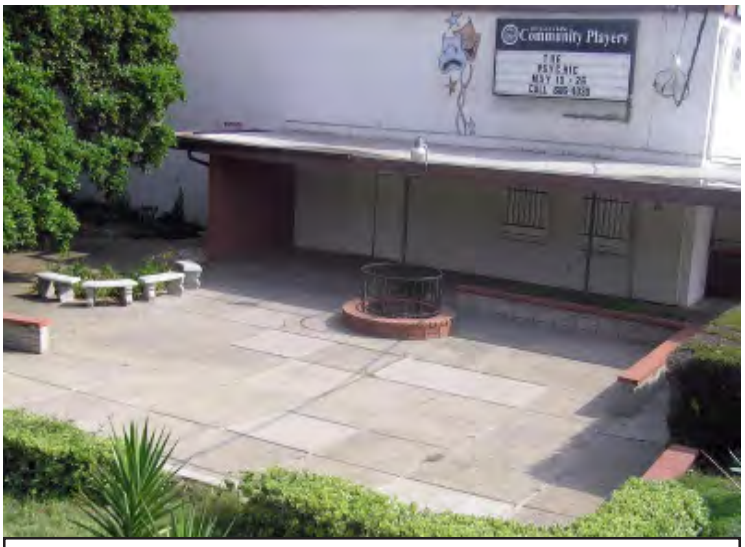


FIGURE 84: PATIO - RIVERSIDE COMMUNITY PLAYERS

SOURCE: WILKMAN HISTORICAL SERVICES

sources of the National Register of Historic Places.

The Riverside Community Players building has been surveyed three times in the past, but none of these surveys was accomplished at an intensive level. The following is a summary of these surveys:

> **1977:** This undated survey was completed c. 1977 by volunteers supervised by Charles Hall Page & Associates, Inc. The Page survey was the City's earliest historical survey accomplished at a time when uniform standards for evaluating historical resources were in their infancy. While it records the basic resource, it makes no conclusion regarding its eligibility for historical designation.
>
> **1992:** In 1992, the theater was surveyed by AEGIS, however, the survey was very sparse, offering very little in the way of information. The only reference to historical significance on the computerized form generated for this survey was the statement "There is no historic structure on this site."
>
> **2003:** In 2003, the theater was again surveyed as part of the City's effort to product a new Downtown Specific Plan. This reconnaissance level survey resulted in a "6Z" California Historical Resources Status Code, signifying a determination that it did not appear eligible for historic listing at any level. This determination appears to have been founded on the incorrect assumption that it was built in 1956 and was, at that time, less than 50-years-old. An examination of the building permit file for the theater revealed that there was no copy of the original 1953 building permit. There was, however, a copy of a septic tank permit with a 1953 date on it, confirming that an official action had been taken that year to supply waste disposal facilities for the building. The 2003 survey was also based largely on architectural significance, something the building lacks due to numerous additions that are unsympathetic to the original Ruhnau design.

The present survey, conducted at an intensive level, comes to a different conclusion regarding the property's significance. Its qualification for designation as a City of Riverside Structure of Merit is based upon Criterion 4 which reads as follows:

> 4. A Cultural Resource that could be eligible under Landmark Criteria no longer exhibiting a high level of integrity, however, retaining sufficient integrity to convey significance under one or more of the Landmark Criteria;

The City of Riverside Landmark Criterion under which the Community Players property would qualify if its architecture hadn't been compromised by later additions is as follows:

> 1. Exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, architectural, or natural history;

Clearly, the Riverside Community Players property's eligibility for designation as a local Structure of Merit is its significance as a cultural institution, not the present state of the architecture of the group's building. Nonetheless, even for the property to qualify for cultural significance the building must retain sufficient architectural integrity to express its historic context. In other words, a person familiar with the building when it was built should be able to clearly recognize the original building in relation to its later additions. In this regard, the Community Players building does retain sufficient integrity to pass this test. Nonetheless, the scale and nature of the alterations do significantly detract from the building's original architectural expression and, therefore, the building does not retain sufficient integrity to qualify for designation as a local Landmark or for listing on the State or National Registers.

Particularly detrimental to the architectural integrity of the building are the additions to the west, south, and east that are characterized by shed roofs. These are completely out of character with the more rectangular theme of the Ruhnau Modern design. In regard to the negative effects of the shed-roof alterations, WHS notes that a sense of architectural integrity could be regained with a well-executed remodel that would remove the shed roofs in favor of a design with flat roofs and canopies. An architect competent in Modern Architecture and architectural preservation could execute such a design alteration to the significant benefit of the building and its symbol as one of Riverside's most revered cultural institutions.

In support of the assertion that the Players is a significant cultural institution, WHS notes that the Players organization is the oldest theatrical group in the City of Riverside, having succeeded in producing plays every year since the first plays were presented under the auspices of the Women's Club in 1925. The importance of this group to the quality of Riverside's cultural expression cannot be underestimated. As for the use of its present location as a central symbol of the Players, WHS notes that while the group has used a number of venues for its performances since 1925, the approximately 60 years during which the current theater building has been in use gives it the status as the singular symbol of the Riverside Community Players.

WHS found several assertions that the Riverside Community Players is *the oldest amateur theatrical group in the nation with a record of continuous operation* but this appears to be unfounded. A typical example of such a statement appeared in the *Riverside Daily Press* issue of June 15, 1958 where the paper stated that the "Players have established a record of 33 continuous playing seasons, using only amateur performers and depending entirely on community support, since they began in 1925. This is a record unsurpassed by any similar group in the nation." *(Riverside Daily Press,* 6-15-1958) A simple internet search conducted by WHS uncovered other theaters with similar claims, including some with founding dates preceding 1925. Therefore while it would be fair to say the Riverside Community Players is *among* the oldest amateur theaters in the nation with a record of year-in-and-year-out productions, it does not appear to be *the oldest* in the nation. There is no doubt, however, that it is the oldest in the City of Riverside and likely well beyond the City's boundaries.

The following additional information pertains to this building:

- **Period of Significance:** 1925 through the present, the period during which the Fourteenth Street theater has been in use.
- **Significance Theme:** Riverside live theater.
- **Contributors:**

  √ Core Ruhnau building
  √ Patio including slabs with inscriptions.

- **Character Defining Features:**

  √ Smooth stucco finish of the core Ruhnau building.
  √ All original windows and doors.
  √ Original sheet metal fascias associated with the Ruhnau design.
  √ Flat roofed and open canopies of the west and north elevations.
  √ Stack bond brick wing walls of the west and north elevations.
  √ Tongue and groove vertical siding associated with the Ruhnau design.

14. Historic Evaluation - Community Medical Building, 4440 Brockton Avenue

a. Community Medical Building Historic Context

The Community Medical Building spans Lots 6 through 9 of the B.S. Finch Tract, recorded in 1903. Figure 85 is an aerial photograph showing this building in relation to the hospital campus. Section 12 J - BUILDING L HISTORIC CONTEXT, provides a short history of this section of Brockton Avenue's transition from a residential to a commercial district.

By 1904, B.S. Finch Tract Lots 6 through 8 were improved with a steam laundry facility known as the Royal Steam Laundry. Lot 9 was improved with a single family residence, owned by Mrs. R.E. Wick at that time. (Riverside County Assessor) Across Brockton Avenue was another steam laundry, the Riverside Steam Laundry. The proximity of this area to Chinatown was likely the reason for the location of two laundries in

FIGURE 85: COMMUNITY MEDICAL BUILDING - CURRENT AERIAL PHOTO

SOURCE: WWW.MAPS.GOOGLE.COM

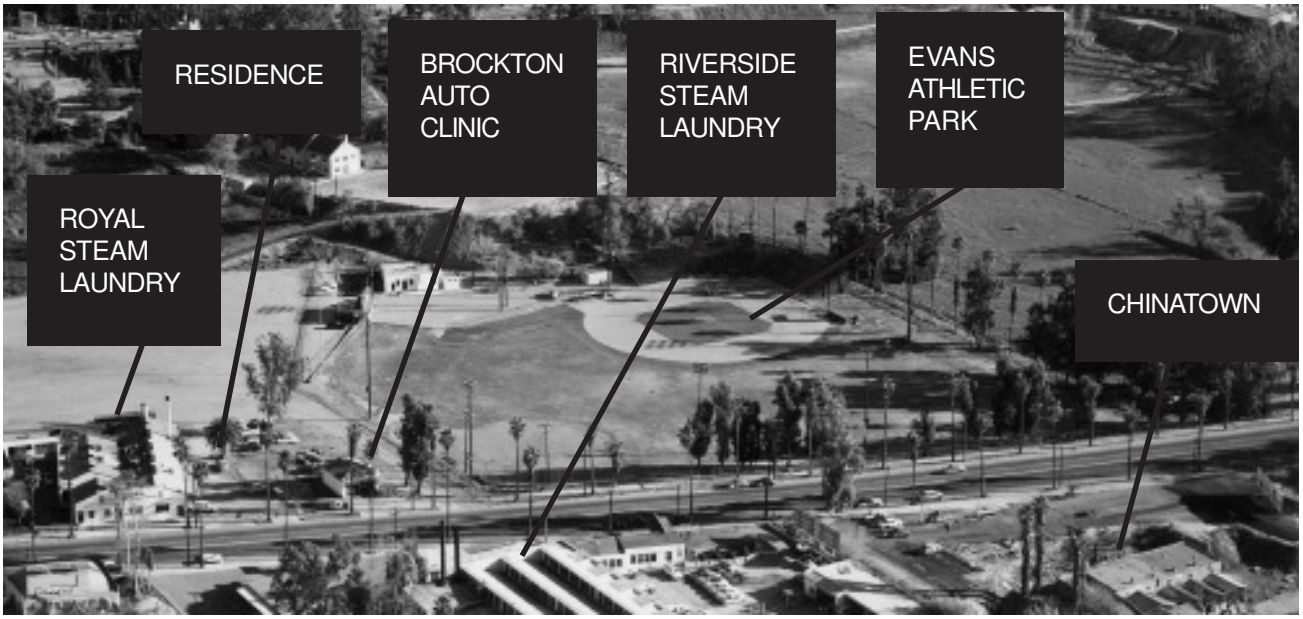


FIGURE 86: BIRD'S EYE VIEW OF BROCKTON AVENUE CORRIDOR - c. 1955

SOURCE: RIVERSIDE CITY COLLEGE DIGITAL LIBRARY

this area. The c. 1955 bird's eye view in Figure 86 shows the locations of these land uses and others at that time.

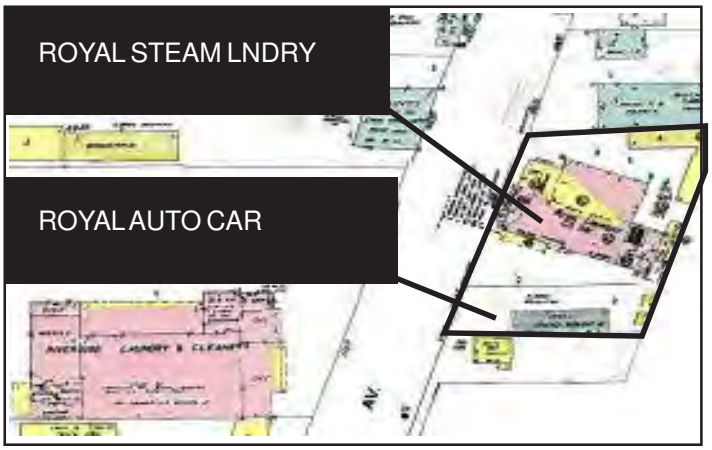


FIGURE 87: ROYAL STEAM LAUNDRY - 1965 SANBORN MAP

SOURCE: SANBORN FIRE INSURANCE MAP - 1965

The residence appears to remain on Lot 9 through at least 1953 (Riverside City Directory - 1953), however, Assessor records document that in 1929, the residence became the property of the Royal Steam Laundry. As evidenced by Sanborn Fire Insurance Maps, the steam laundry remained on the property through at least 1965. By1963, the residence on Lot 9 had been replaced with the Royal Automatic Car Wash. The Sanborn Fire Insurance Map in Figure 87 shows the much expanded Royal Steam Laundry and the location of the Royal Automatic Car Wash.

On March 16, 1967 a building permit was issued to replace the steam laundry and automatic car wash with a multi-tenant medical office building. The building permit documents the architecture firm as Cowan & Bussey and the contractor as Robinson &

Wilson. On December 5, 1967, the building was issued an occupancy permit and tenants began to move in to what became known as the Community Medical Building. The 1968 city directory lists 11 physicians and one pharmacy in the new building. Assessor records document the new owner of the building as Harry B. Frey et. al.

As noted above, the Community Medical Building was designed by the architectural firm of Cowan & Bussey. The principals of this firm were William Lawrence Cowan and Noble R. Bussey.

William Lawrence Cowan: According to the 1930 Federal Census, William L. Cowan was born in Tennessee c. 1923. At that time, the 7-year-old Cowan was living in Perris, California with his 36-year-old father Granville, his 34-year-old mother Nellie, and his two sisters. His father was employed as a laborer on a citrus ranch. By 1940, the Federal Census documents that the family had moved to Riverside, where William lived with his mother, father and their growing family of three girls and two boys in a home on Denton Street. William's father was still employed as a ranch laborer and his mother had found work as a laundress.

Cowan's 1954 application for membership in the American Institute of Architects provides considerable documentation of his background. At the time of the application, he was living in Monrovia. The application notes that he graduated from Riverside Poly High School in 1940. Following his high school graduation, he spent a year at Riverside College, followed by a year and a half at the University of Redlands. In 1942, he enlisted in the Navy, graduating from North Western University Midshipman's School in 1944 and the Advanced Line Officers School of Florida in 1945. In 1952, he graduated from the University of Southern California School of Architecture with a Bachelor of Arts Degree. His Naval service took him to Hawaii, the Philippines, and the South Pacific Islands. He served as a Naval Lieutenant from 1943 to 1945. (http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/ahd1009056.aspx, Accessed 2013)

After leaving the Navy, Cowan worked for Riverside architects G. Stanley Wilson from 1946 to 1947 and Herman Ruhnau from 1947 to 1948. From 1948 to 1949 he worked for architect William Reed of Bell California, and from 1948 to 1949 he worked for D.S. Reynolds, a Los Angeles engineering company. After graduating from USC, he practiced architecture as an employee of G.W. Galloway Co. Engineers of South Pasadena from 1952 to 1954. (Ibid)

The 1956 AIA Directory lists Mr. Cowan with an office in Arcadia, California working under the business name of William L. Cowan and Associates, Architect. At that time he was not affiliated with Noble Bussey. Principal works listed in this directory are: Special Fuels Installation (Edwards Air Force Base, 1954) and a Cleaning Plant (Riverside, 1949). (http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/1956%20American%20Architects%20Directory.aspx, Accessed 2013)

Noble R. Bussey: The 1940 Federal Census documents Noble Bussey as a native of Missouri, born c. 1928. In 1940, the 12-year-old Bussey was living with his parents William R. Bussey and Nora M. Bussey on Fourth Street in Riverside. Also in the home with Noble were two brothers. Under employment, the 1940 Federal Census form entry says "State Relief Adm".

WHS found no documentation of Noble Bussey as a member of the AIA, so information on his education and work experience is much more limited than that for William Cowan. The 1947 Riverside city directory lists Noble as a draftsman working for Riverside architect G.Stanley Wilson. In 1953, Mr. Bussey was listed in the Richmond, California directory as a draftsman. By 1955, the Riverside city directory documents that Mr. Bussey was back in Riverside, again working as a draftsman.

Cowan & Bussey, Architects: The 1962 AIA Directory lists Mr. Cowan as a principal of the firm Cowan & Bussey in Riverside, California. This directory documents that the firm was formed in 1959, but a later AIA directory notes the founding year of the firm as 1957. Principal works listed in the 1962 directory are: the Caravan Inn (Riverside, 1958), a Riverside County Flood Control Office Building (Riverside, 1960), Church of Christ (Riverside, 1960), Bourns Industrial Plant (Riverside, 1961). (http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/1962%20American%20Architects%20Directory.aspx, Accessed 2013)

The 1970 AIA Directory documents a new address for the firm of Cowan & Bussey in San Bernardino, California. Principal works listed are: Bourns Electrical Plant (Riverside, 1963), Castle View Elementary School (Riverside, 1966), Master Plan for California Baptist College (Riverside, 1968), California Baptist College Dormitories (Riverside, 1968), Central Plaza Office Tower (Riverside, 1969), Riverside City College Biological Science Building (Riverside, 1968). The directory also notes that the firm earned the 1963 Top Ten Plant Award from *McGraw Hill Factory Magazine* for the firm's design of the Bourns Electronic Plant. (http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/1970%20American%20Architects%20Directory.aspx, Accessed 2013)

In June of 2012, Jennifer Mermilliod of J.M. Research and Consulting completed a Cultural Resources Survey for the California Baptist University Specific Plan. In her report, Ms. Mermilliod identified several Bussy & Cowan designed buildings as follows:

- Lancer Arms, Buildings 1 and 2 (1964-5)
- Smith and Simmons Halls, Two Story Addition (1968)
- Van Dyne Field House (1968)
- Knights of Pythias Hall (now the CBU Bourns Laboratories) (1966)

(JM Research & Consulting 2012)

Ms. Mermilliod's research led to the July 1967 issue of *Architectural Digest* which features Mr. Cowan's residence at 4269 Miramonte Drive in Riverside. The Post and

Beam style Modern residence is lauded in the magazine for its sensitivity to the natural features of the site and its overall design excellence. (Little 1967: 42-47)

b. Community Medical Building Architectural Description

The Community Medical Building is a Mid-Century Modern structure with that is one-story in height and sits atop a subterranean parking structure. The building has "four-sided" architecture, with a generally consistent appearance on all sides. The building has an offset rectangular floor plan and is situated on a raised concrete foundation. Most of the building's walls are constructed of heavily sandblasted 8" by 16" concrete block and the structure's flat roof terminates in wide overhangs equipped with stucco finished soffits and fascias. Situated well inboard from the outer edges of the roof are four stucco finished mechanical equipment screens. Dividing the building into visual segments are concrete block wing walls that are situated at regular intervals along the west, east, and south elevations. All windows are fixed glass held in place by dark brown painted frames that appear to be made of aluminum. The building's windows are dark tinted glass in the upper halves, with painted spandrel panels occupying the lower halves. All of the exterior doors that access doctor's offices are solid wood. A distinctive feature of the building is a raised walkway that extends around the entire perimeter of the building. The walkway forms a plane situated above grade, which is designed to give the building the appearance of floating over the site. Shrubbery at the fringe of the raised walkway, however, obscures this design intention. The walkway is finished with square terra cotta tiles on both the walking surface and the wide faces of the walkway platform. Bordering the walkway is a rectangular tubular steel railing that angles out slightly from the edge of the walkway. The following is an elevation-by-elevation description of the building, focusing on unique characteristics not already covered.

FIGURE 88: WEST ELEVATION - COMMUNITY MEDICAL BUILDING

BROCKTON AVENUE ENTRY TO RIGHT

Community Medical Building West Elevation: The west elevation faces Brockton Avenue and includes the building's "front door". Centered on this elevation is a public corridor that extends through the building in an east-west direction. To give this access point visual distinction, the entry is recessed from the overall face of the building and the perimeter roof overhang has a notch that follows the shape of the recess. Access to the inside of the building is provided via dark bronze anodized aluminum framed storefront windows and doors. Open back concrete stairs flanked by rectangular steel tubular railings provide the means for pedestrians to go from the public sidewalk to the entry doors. The wall to the north of the entry is fitted with a sign consisting of bronze pegged-on letters reading "4440 COMMUNITY MEDICAL BUILDING". An identical signs appears next to the entry on the east elevation.

Community Medical Building North Elevation: The north elevation is the least visible of the building's four elevations. Obscuring a clear view to the entire elevation is the hospital storage building, Building L, which angles into the Community Medical Building's property, creating a "pinch point" midway along the the north property line.

The part of the north elevation visible from Brockton Avenue is a continuation of the west elevation's theme of a roof overhang covered walkway, concrete block walls segmented by windows, and angled metal railing. Toward the mid-point of the north elevation, the building nearly touches a corner of Building L next door. The walkway in this area is secured by wrought iron fencing, and stairs from this area provide access to the subterranean

FIGURE 89: NORTH ELEVATION - COMMUNITY MEDICAL BUILDING

TOP: WEST HALF
BOTTOM: EAST HALF

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 90: EAST ELEVATION - COMMUNITY MEDICAL BUILDING

REAR ENTRY TO RIGHT

SOURCE: WILKMAN HISTORICAL SERVICES

parking below. A metal patio cover has been added to this area of the building to keep rain water out of the parking area.

The part of the north elevation visible from the rear parking area is rather utilitarian in appearance, its concrete block wall bifurcated with a panel of stucco that is flanked by two windows. This part of the north elevation also lacks the canopy and walkway feature characteristic of the rest of the building. Adding to the utilitarian appearance of this part of the building is a concrete block wall enclosed trash dumpster area guarded by metal gates and the driveway and entry to the subterranean parking.

Community Medical Building East Elevation: The east elevation is essentially a mirror image of the west elevation, except that access to the building is primarily from a ramped driveway that extends up to the building from the north and south, parallel to the building face. Pedestrian stairs are also located at the north and south ends of the walkway.

Community Medical Building South Elevation: The south elevation carries the theme of the west and east elevations around to the south side of the building. Toward the east half of this elevation, the building notches in a northerly direction, essentially mirroring the building extension on the north side of the building. Extending down from Brockton Avenue, a driveway provides access to the subterranean parking. Like the north elevation, the building walls on this side of the building include panels of stucco.

Where the building notches toward the north, are concrete stairs that lead to the parking structure below. And, like the north elevation, the area associated with these stairs is protected from rain by a corrugated metal patio cover that is a later addition.

FIGURE 91: SOUTH ELEVATION - COMMUNITY MEDICAL BUILDING

SOURCE: WILKMAN HISTORICAL SERVICES

Community Medical Building Site and Landscape Features: The landscaping on the property is largely located on the east and west frontages, with a small amount of landscaping wrapping around to the north elevation and some planters situated outside the subterranean parking on the south side of the building. The most notable landscape feature consists of multiple Lemon Scented Gum Eucalyptus trees that lend a lacy appearance to the building as viewed from a distance. Other planters are planted with lawn, groundcovers, and small shrubs. Hardscape improvements include the driveways to the subterranean parking, the ramped driveway to the east entrance, and a terracotta tile walkway that extends into the Brockton Avenue public sidewalk at the main westerly entry to the building.

c. Riverside Community Medical Building Historic Significance

WHS has determined that the Community Medical Building does not qualify for historic designation at any level, and has accordingly assigned it a CHR Status Code of 6Z. (Found ineligible for NR, CR, or Local designation through survey evaluation.) Other than its architect, it is not associated with persons important in history and there is no evidence it is associated with events important in history. Further, its architecture does not rise to the level of a significant example of Modern Architecture.

The Cowan & Bussey architectural firm did a considerable amount of work in Riverside, some of it very distinctive. As local Riverside architects go, however, the portfolio of Cowan & Bussey's work lacks the overall design creativity of other Riverside architects such as Clinton Marr and Herman Ruhnau. Nonetheless, the firm is important in the realm of Riverside architects and some of their works are worthy of cultural resource status. Remarkable buildings designed by Cowan & Bussey include the Church of

FIGURE 92: DISTINCTIVE COWAN-BUSSEY BUILDINGS
TOP LEFT: CHURCH OF CHRIST
TOP RIGHT: COWAN RESIDENCE
BOTTOM RIGHT: MAGNOLIA MEDICAL

Christ (6160 Riverside Avenue, 1960), the Magnolia Professional Building (6770 Magnolia Avenue, 1965), and the Cowan Residence (4269 Miramonte Drive, 1965).

The Community Medical Building has Miesian influences, but it fails to present a unified or distinctive theme. Ludwig Mies van der Rohe (1886 – 1969) was a German-American architect and leader of the Modern movement. His buildings were known for a minimal framework of structural order balanced against free-flowing open spaces. He called his buildings "skin and bones" architecture. Many of his buildings appeared to be floating over their sites, a concept employed in the Community Medical Building. Figure 93 includes an image of the Farnsworth house in Illinois, an iconic example of a Miesian floating building. (Richards 1977: 215-219)

The Community Medical Building has a number of shortcomings that detract from its architectural significance. Among them are:

- The lack of a distinct entry point from Brockton Avenue, which tends to give the Brockton Avenue frontage a rather weak, unfocused look.
- The thickness of the face of the perimeter walkway, which gives the building a bottom heavy appearance.
- The thickness of the roof fascia, which tends to "push down on the building".
- The use of square terracotta tile on the face of the perimeter walkway which tends to conflict with the linearity of the building.
- The raised vehicular ramp at the back of the building which essentially destroys any sense of design continuity on that side.

FIGURE 93: DISTINCTIVE "FLOATING" BUILDINGS
TOP LEFT: FARNSWORTH RESIDENCE, PLANO, ILLINOIS
TOP RIGHT: STANDARD INSURANCE BLDG , 14th STREET, RIVERSIDE
BOTTOM RIGHT: DOWNTOWN LIBRARY, MISSION INN AVENUE, RIVER

- The very shallow angle of the perimeter walkway railing which is not sufficient to provide the kind of drama this important design feature should have.

Overall, the building lacks a sense of design focus and it does not have the delicate linearity characteristic of better buildings in Riverside. Figure 93 includes photos of the iconic Farnsworth house (Plano, Illinois, 1951) Riverside's Standard Insurance Building (3380 14th Street, 1961) and the Downtown Riverside Branch Library (3581 Mission Inn Avenue, 1963). These and other buildings are better examples of "floating" buildings.

15. Historic Evaluation - Brockton Auto Clinic, 4468 Brockton Avenue

a. Brockton Auto Clinic Historic Context

The Brockton Auto Clinic is situated on Lot 10 of the B.S. Finch Subdivision, recorded on March 12, 1903. Figure 94 is an aerial photograph showing this building in relation to the hospital campus. Section 12 J - BUILDING L HISTORIC CONTEXT provides a

FIGURE 94: BROCKTON AUTO CLINIC - CURRENT AERIAL PHOTO

short history of this section of Brockton Avenue's transition from a residential to a commercial district.

Riverside County Assessor records for 1904 list the owner of Lot 10 as Lois A. Burdick. Assessor records show no valuation for structures for 1904, 1905, and 1906. In 1907, a structure valued at $75 is documented on Lot 10. The nature of this structure is not noted, however, it was likely a very simple residence. This reasoning is based on the fact that in 1910, when the Assessor rolls carried the same value, the Federal Census listed the property as the location of a residence. The 1908 Sanborn Fire Insurance map gives further documentation to the improvement of Lot 10 with a residence. Assessor records document that the residence remained on this property through c. 1939.

The 1900 Federal Census lists Mrs. Burdick as 42-years-old and living with her husband Joseph and five children on Howard Avenue in Riverside. This census notes her birth place as Wisconsin and her birth year as c. 1858. Her husband was documented to be a house carpenter and she was not employed outside of their home. In 1905, the city directory lists Lois living on Seventh Street in Riverside, where her occupation is noted as that of a dress maker. Her husband is not listed in that directory. The 1910 Federal Census documents Mrs. Burdick as servant living in Pasadena.

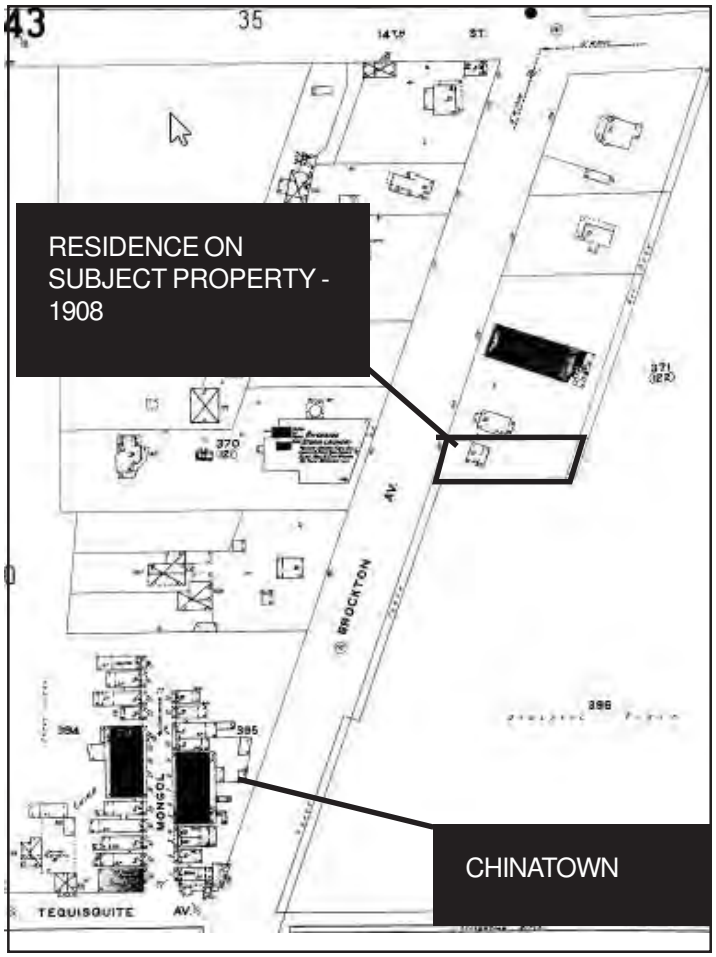
From 1908 through 1939, Assessor records list the property under the ownership of various members of the Crawford family. Ida E. Crawford owned the property in 1908 and 1909. WHS found Ida in the 1880 Federal Census, which documents her as a native of Indiana, born c. 1862. At that time, she was an 18-year-old student, living with her parents and her five siblings in Indiana's Sullivan County. In 1911, her brother William Webster Crawford assumed ownership of the property and remained its owner through 1932. William was born in Indiana c. 1863 and worked as a wallpaper hanger while a resident of the Brockton Avenue residence. The 1910 Federal Census, records Mr. Crawford as the head of the household, living at the Brockton Avenue residence with his wife Jennie and their two children. William Crawford died in 1930 and his wife died in 1931. (www.ancestry.com, Accessed 2013) In 1933, the property passed to William's son William W. Crawford Jr., born in California in 1909. At that point, the assessed value of the property dropped from $120 to $40, a change likely reflecting some damage to the property. As of 1930, William Jr. was living in Glendale, California with his wife Winifred and working as a newspaper press man. William Jr. died in Hemet in 1991. (California Death Index) In 1939, the Assessor's records indicate no value for structures, so the residence was no longer on the property when it was assess for that year.

For the single year of 1940, Assessor records list Floyd Jackson Cockerham as the owner of the property. Born in North Carolina in 1894, Mr. Cockerham owned a roofing company in Riverside. His Night Ball team, the Cockerham Roofers, was among the local baseball teams playing in the adjacent Evans Athletic Park. (WHS 2013) The 1939 city directory lists Mr. Cockerham living at a residence on Seventh Street in

Riverside with his wife Vergie. Mr. Cockerham died in Riverside in 1971. (California Death Index)

Building Permit records document that a permit for a "Stucco Repair Garage" was issued for the subject property on December 4, 1939. Listed as owners/builders were "Smith & Patterson" (sic) On January 16, 1940, the City issued an occupancy permit for the completed structure. (Building Permit # 21529) This building permit represents the beginning of the history of the auto repair garage on the subject property.

Corresponding to the above building permit, County Assessor records document the owners of the subject property as Arthur Smith and Albert W. Pattison. The valuation for the repair garage was $370. WHS found no significant permits for the subject property subsequent to the issuance of the original building permit. In 1962 , however, Arthur Smith secured a building Permit to "Close garage door." (Building Permit 2249) and in 2011, Clinton Randolph took out a permit to upgrade the building's electrical service. (Building Permit 11-0356)



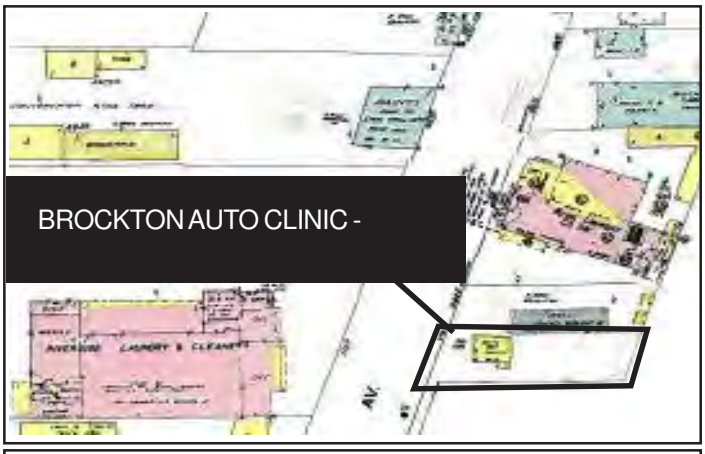


FIGURE 95: BROCKTON AUTO CLINIC - 1908 and 1965 SANBORN MAPS

SOURCE: SANBORN FIRE INSURANCE MAPS - 1908 &1965

As noted earlier, the area in which the subject building is situated was once a small commercial strip, extending along both sides of Brockton Avenue from Fourteenth Street to Tequesquite Avenue. From 1940 through the present, the subject property was occupied by various uses, most notably auto repair businesses.

On the east side of Brockton Avenue in this area, the 1960 city directory lists Kathryn's Shop of Beauty (4408), E.J. Loustaunau residence (4414), State Farm Insurance (4420), P.L. Hunsaker Accounting (4422), Riverside Motor Supply (4426), Royal Laundry (4440), and Brockton Auto Repair (4468). Properties on the west side of the street included a vacant building at 4407, the K.J. Pendergast residence (4413), D.B. Difani Accountant (4421), Elmer Lovins residence (4423), F.A. Watrous Cabinet Maker (4427), Russell Walling Cabinet Shop (4429), Acme /Tiny Tot Laundry (4435), a vacant building at 4443. Ed Martin's Garage (4449), Riverside Laundry & Dry Cleaners (4459), Bud & Harry's Service Station (4481), and Riverside City School Bus System (4489-91). Immediately south of these latter businesses was Riverside's Chinatown which, by that time was a largely unoccupied "ghost town".

Today, only remnants of this former business strip remain. Most of the buildings on the west side of the street are vacant, with the notable exception of a Del Taco fast food restaurant at the southwest corner of Brockton Avenue and Fourteenth Street. Other than the hospital owned buildings, only two active commercial/office buildings remain on the east side of Brockton Avenue between Fourteenth Street and Tequesquite Avenue. These consist of the multi-tennant Community Medical Building to the north of the subject property and the Brockton Auto Clinic which occupies the building on the subject property.

The Brockton Auto Clinic building has been occupied by at least four different types of businesses since it was completed in 1940. The first business was Smith & Pattison Auto Repair. The principals in this business were John Arthur Smith and Albert William Pattison.

According to the 1930 Federal Census, Arthur Smith was born in Tennessee, in 1889. It appears he had children late in life, as the 1930 Federal Census lists only Arthur and his wife Vivian living in his household on Locust Street in Riverside. By 1940, Mr. Smith was living at the same address, but his family included his wife and two children. Both censuses list Arthur's occupation as that of an auto mechanic. Arthur died in December of 1968. (Social Security Death Index)

Albert Pattison was born in Michigan in 1878. He was married to Mabel Pattison and had two children. (www.ancestry.com, Accessed 2013) The earliest Federal Census record showing Pattison living in California is the 1930 Census, which shows him living on the same street as his partner and living with his wife and two lodgers. By 1940, he had moved to Orange Vista Way and was living with his wife only. (1940 Federal Census) Mr. Pattison died in May of 1973. (Social Security Death Index)

By 1963, a new business, Domestic Appliance Service, occupied the subject building. The listed owner of the property was Arthur Smith et. al. (Riverside County Assessor) The 1966 criss-cross directory lists another new business at the Brockton Avenue location, Magic Carpet Rug Service. In 1968, the criss-cross directory lists Steve's Lawn Mower Service in the building. The exact beginning and ending dates of these

FIGURE 96: ELEVATIONS - BROCKTON AUTO CLINIC

TOP RIGHT: SITE IMPROVEMENTS
TOP LEFT: WEST & NORTH ELEVATIONS
MIDDLE: SOUTH ELEVATION
BOTTOM: EAST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

leases are unknown, as there are gaps in available criss-cross directories at the Local History Resource Center of the Riverside Public Library. However, criss-cross directories are available for every year from 1968 through 1974, and all of these directories list Steve's Lawn Mower Service as the occupant. In 1975, the business changed to Brockton Auto Clinic, a name that has remained with the building through the present day. WHS did not secure ownership data beyond 1970, so it is unknown when the property's ownership may have changed after that year.

b. Brockton Auto Clinic Architectural Description:

The Brockton Auto Clinic building is a Western False Front style rectangular stucco over wood frame building with a corrugated metal gabled roof and concrete slab foundation. The front gable of the building is situated behind a western false front, whereas the rear gable is open to view. Business signs composed of contemporary individual plastic faced letters are situated on the west, north, and south elevations.

Brockton Auto Clinic West Elevation:
The building's west elevation presents its Western False Front to Brockton Avenue.

Situated toward the north end of the elevation is a corrugated metal overhead door integrated with a matching man-door. Immediately south of the overhead door is a fixed glass, wood framed window guarded by wrought iron that incorporates an ivy theme. At the far south end of the west elevation is a contemporary six-panel metal clad entry door guarded by a contemporary security screen door. Business signs are situated toward the top of this building wall.

Brockton Auto Clinic North Elevation: The north elevation is a plain stucco finished wall with a business sign situated toward the west end near the top of the wall. The building's corrugated metal gabled roof is visible in relation to this elevation.

Brockton Auto Clinic East Elevation: The east elevation is a plain stucco finished wall penetrated by a metal roll-up door. Projecting easterly from the area just below the gable end is a metal patio cover. The top of the gable end has a metal louvered attic vent.

Brockton Auto Clinic South Elevation: The south elevation is essentially a mirror image of the north elevation except it has a small projection at its east end.

Brockton Auto Clinic Site and Landscape Features: The site is entirely paved. An outdoor lift is situated south of the building, and a large metal shipping container is situated just east if this lift. Several outdoor lifts are located behind the building.

c. Brockton Auto Clinic Historic Significance

The Brockton Auto Clinic is a vernacular Western False Front commercial building, very typical of the 1900s through 1940s. It lacks any architectural significance and is not associated with any persons or events important in history. There are many other examples of this sort of commercial building throughout Riverside, particularly in the North Main Street area between First Street and the 60 Freeway. The Brockton Auto Clinic building, therefore, does not qualify for historical designation at any level and has been assigned a CHR Status Code of 6Z. (Found ineligible for NR, CR, or Local designation through survey evaluation.)

16. Historic Evaluation - Calvary Presbyterian Church - 4495 Magnolia Avenue

a. Calvary Presbyterian Church Historic Context

To the south and east of the hospital property is the historically significant Calvary Presbyterian Church campus. Calvary Presbyterian Church has an extensive history dating back to 1887. For a thorough history of the Church, the reader is referred to the 2009 WHS report: *Cultural Resources Impacts Evaluation of Riverside Community Hospital Bed Tower Replacement and Cultural Resources Survey and Evaluation of Original Hospital Building and Calvary Presbyterian Church* (WHS 2009: 46-70) on file at the City of Riverside Planning Division. This section draws heavily from the

FIGURE 97: CALVARY PRESBYTERIAN CHURCH CAMPUS

SOURCE: WWW.MAPS.GOOGLE.COM

above document, and is designed to serve as a brief history of Calvary Presbyterian Church in relation to Riverside Community Hospital.

The church is a designated City of Riverside Structure of Merit and it was found eligible for listing on the National Register of Historic Places in the 2009 WHS report.

The first Presbyterian church in Riverside was located in the Arlington area of the City. Known as Magnolia Presbyterian Church, it was dedicated on April 25, 1881 (Hall 2008: 9) Among the parishioners who traveled from the downtown area to Arlington each Sunday, were Matthew Gage and his wife Jane. When Jane discovered she was pregnant, the Gage family decided to initiate Presbyterian services in Riverside's downtown Pavilion, located at the northwest corner of Main and Seventh (now Mission Inn Avenue) Streets. (Hall 2008: 61) Presbyterians living in and near the downtown area came to prefer the Pavilion to the more distant Arlington church and the numbers of participants grew.

On June 19, 1887, the Presbyterians formally established the downtown congregation as a new Presbyterian Church under the auspices of the Los Angeles Presbytery. (Jenkins 1973: 1) Early services were held in a variety of places, including the Pavilion, the Loring Opera House, and the Riverside Odd Fellows Hall. In 1890, the church voted to purchase a site at Ninth and Lime Streets on which to build its own church, and on July 19, 1891, the new church building stood completed. (McGugian : 116-117)

By 1931 it was becoming apparent that the Ninth and Lime church could not accommodate the needs of the growing congregation. While the onset of the Great Depression had caused other churches to reduce their ambitions, Calvary saw the economic downturn as an opportunity to take advantage of lower property and labor costs to build a new church. At the church's annual meeting in April of 1931 the decision was made to fund a new church. (Ibid: 117)

Mr. H.A. Lynn, Chairman of the Board of Trustees, recommended the congregation purchase the Magnolia Avenue site where the church is located today. Known as the School/Hospital Site, it was partly owned by the Board of Education and partly owned by Riverside Community Hospital. To stimulate interest in a building fund campaign, open-air church services were occasionally held on the vacant building site. (Ibid: 118)

To design the new building complex, the church chose prominent Los Angeles architect Carleton Monroe Winslow. He had designed a number of other churches among which were Community Presbyterian Church in Beverly Hills, First Baptist Church in Pasadena, and Mary Star of the Sea Church in La Jolla. (*Los Angeles Times*, 10-17-1946: 12) He was also responsible for First Congregational Church in Glendale, Saint Augustine-by-the-Sea Church in Santa Monica, and Vermont Square Methodist Church and School in Los Angeles. (http://www. digital.lib. washington.edu, Accessed 2009)

While most Southern California churches in that day were being designed in Spanish Colonial influenced architecture, Calvary chose to build in a Gothic Revival style, an architectural school having deep roots in the Presbyterian tradition. Figure 98 is a rendering of the proposed church. Church funds did not allow for the immediate completion of the entire planned church campus, so the congregation decided to build as its Sanctuary, what would later become the church's Fellowship Hall. While much smaller than the planned sanctuary, this first phase would

FIGURE 98: ARCHITECT'S 'S RENDERING OF CHURCH

SOURCE: CALVARY PRESBYTERIAN CHURCH

provide one third more room than the downtown church. In the rendering, the Fellowship Hall is the smaller building to the right. The Sanctuary, which would not be completed until 1955, is to the left. The cloister walk between the two buildings was never built. In addition to the Fellowship Hall, the first phase of construction also included the church offices and a classroom building. On October 21, 1935 a building permit was secured for the first phase of construction, with C.M. Winslow listed as architect and Harman & Co. listed as contractor. (City of Riverside Building Permit #16730) Construction commenced on November 10, 1935, and the cornerstone was laid on February 2, 1936. (McGuigan 1987: 119)

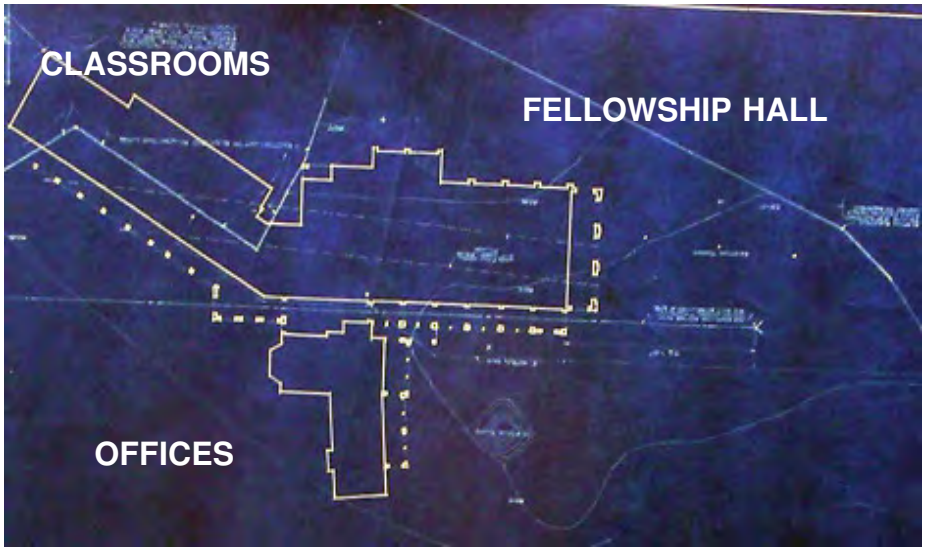


FIGURE 99: PHASE ONE DEVELOPMENT

SOURCE: CALVARY PRESBYTERIAN CHURCH

The final services were held in the downtown church on June 28, 1936 and the congregation subsequently moved into the new first phase buildings at the Magnolia site. By Easter 1937 the entire debt was paid and on June 13 of that year, Calvary's Jubilee, the church was dedicated. (Ibid: 118-119)

With continued growth straining the church's facilities, a new building fund campaign was initiated in 1939., (Ibid: 119) and on September 20, 1940 a building permit was issued for the construction of the basement portion of the permanent Sanctuary building. The upper part would have to wait until more funds could be secured. Carleton M. Winslow continued on as architect and Eric. W. Entman was hired as contractor. (City of Riverside Building Permit #22348) Still remaining to be completed was the above-grade basilica style Sanctuary.

By 1953, the membership had grown to 2,135 and the need for the completion of the church campus was becoming critical. (McGuigan 1987: 79) The Building Fund had received cash and pledges totaling about $215,000, with 65% of that figure in cash. It would take between $200,000 and $225,000 to complete most of the Sanctuary. This amount would not, however, allow for the construction of the Peace Tower, heating, pews, organ, or various furnishings. These would add $100,000 to that figure. Despite

the known shortage of funds, the Building Committee recommended that construction commence. (Ibid)

The Committee projected that funds to complete all needed improvements would be secured through the continued growth of the church. In any event, the church had already outgrown its available space and more room was needed. On August 24, 1954 a building permit was issued for to complete the Sanctuary. Architectural services for the work were provided by Winslow's son, Carleton Monroe Winslow Jr. Contracting services were again provided by Eric Entman. On July 19, 1955 a final inspection was completed (City of Riverside Building Permit #21385), and on September 15, 1955 the Sanctuary was dedicated. Seating capacity was 800. (McGuigan 1987: 121)

The final phase of construction was initiated when, in June of 1961, the Congregation approved a building fund of $225,000 for a Christian Education building and the remodel of the Fellowship Hall. (Ibid: 122) Riverside architect Clinton Marr prepared the plans and a building permit was issued on July 18, 1961 with Eric Entman again listed as contractor. Final Inspection was completed on September 12, 1962. (City of Riverside Building Permit #1109)

b. Calvary Presbyterian Church Architectural Description

Calvary Presbyterian Church is a complex campus built over several decades. All but the Christian Education building are designed in the Gothic Revival style more commonly found in East Coast cities, in England, and in Europe. It stands alone in Riverside as the only example of a large-scale Gothic Revival building. The Fellowship Hall, Sanctuary, and Office wings are all constructed of board formed reinforced concrete. The older classroom wing (Westminster Hall) and the Christian Education building are build of conventional stud wall construction with smooth plaster finish. All buildings have generally rectangular floor plans, with occasional notches and extensions breaking some the predominantly rectangular patterns. Original operable windows in the older parts of the church are mostly wood framed casement types, while those of the later built Sanctuary building are metal framed casement windows. The mostly gabled roofs of the older buildings are all covered in red clay barrel tiles.

Sanctuary: The Sanctuary has a main floor and basement element. The basement was completed in 1941, whereas the upper part of the building was completed in 1955.

> **Sanctuary East Elevation:** The main entrance to the Sanctuary is via the east elevation. This elevation features a recessed central pointed arch splayed portal with a pair of wooden square-paneled doors. Dividing the doors is a concrete column on a high pedestal. The shaft of the column has an "X" motif topped by a crocketed capital and a statue of Jesus Christ. Access to this entry is via a concrete staircase with concrete sides and iron railings. Framing the portal are buttresses with gable-shaped weatherings and vertical rectangular extensions having sloped caps. Crowning the portal is a solid balustrade featuring a foliate frieze divided by vertical subsets. Above the portal a massive rose window sits

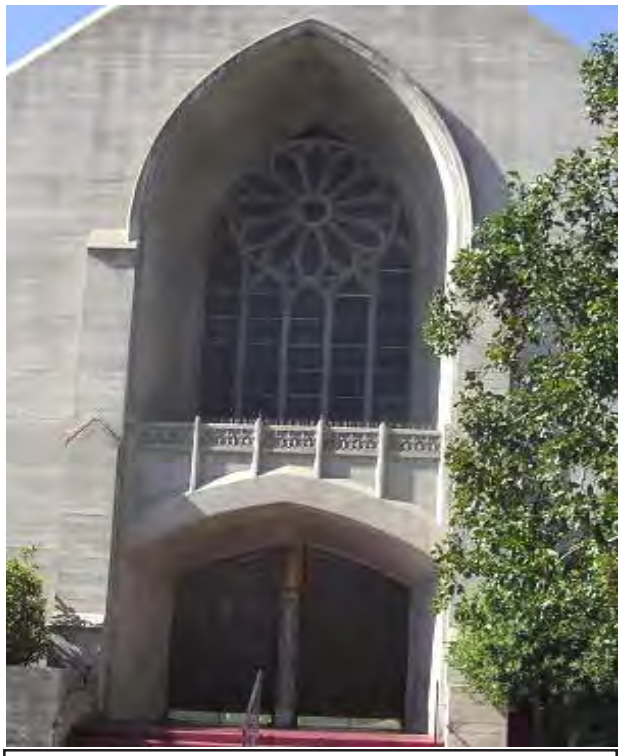


FIGURE 100: SANCTUARY EAST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

atop pointed arch stained glass windows in a recessed pointed arch frame with molded archivolt. The outer walls of the east elevation step back on both sides of the gabled entry to create notches that are partially filled by vertical elements capped in copper roofing and punctuated by one pointed arch stained glass windows each.

On the right side of the east elevation is a prominent square, three-tier concrete bell tower with beveled corners. Set within the upper tier on all four sides of the bell tower are rectangular double louvers. Above the louvered panels the cast concrete upper walls feature decorative fins. The north side of the tower features a pointed arch stained glass window. A multifaceted copper spire extends above the northeasterly most corner of the tower, situated on a multifaceted concrete base. It is punctuated by louvered panels and topped by a cross.

Sanctuary North Elevation (Front): The front portion of the sanctuary north elevation faces a brick paved courtyard onto which also face the church offices and the south side of the Fellowship Hall. The courtyard is shaded by mature trees. Behind the bell tower on this side of the Sanctuary is a side entry with gabled roof covering. The original plans show this side entry as the southerly

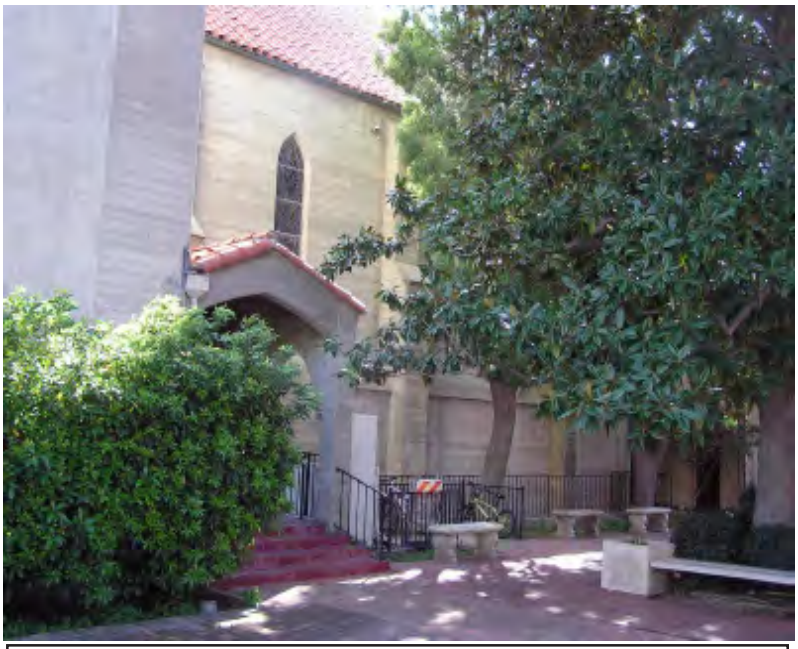


FIGURE 101: SANCTUARY NORTH ELEVATION (FRONT)

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 102: CLOSE-UP OF NORTH ENTRY

SOURCE: WILKMAN HISTORICAL

termination of a cloister linking the Fellowship Hall to the Sanctuary. This cloister is visible in the rendering of the church but it was never built. The open sides of the porch feature an arcade of pointed arches resting on columns with modified Corinthian capitals and iron railings. On the inner porch area, the arcade repeats itself as a blind arch. Providing access to the Sanctuary via the bell tower is a set of wooden square-paneled doors. The main portion of the north elevation is divided into three bays by buttresses with weatherings through each bay. Punctuating each bay is a pointed arch stained glass window. In a recessed area, the basement wall of this elevation guarded by an iron balustrade. Diaphragm arches divide each of the bays. Punctuating the basement wall are rectangular windows and doors.

Sanctuary South Elevation: The south elevation faces a large paved parking lot that was a grove of eucalyptus trees during the first several years of the church's existence on this property. The original basement level is visible at the lower part of this elevation, punctuated by metal framed casement windows. The south elevation is divided, roughly in its center, by a porte-cochere. The portion of this elevation east of the porte cochere is divided into four bays by buttresses with gable tops at the weatherings. Above the gable tops, the buttresses step back toward the building wall with each step topped by a sloping cap. The most easterly bay is punctuated by two small pointed arch stained glass windows,

while each of the other bays east of the porte cochere has a large single pointed arch stained glass window.

FIGURE 103: SANCTUARY SOUTH ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

The porte-cochere sits below a two-story gabled projection. The low arched portal of the porte-cochere can be closed off with decorative wrought iron gates. The upper area of the porte-cochere serves as a transept wing with two pointed arch stained glass windows each penetrating the east and west walls of the transept. The south gable end of the porte-cochere/transept is flanked by a pair of buttresses each with two steps topped by sloping caps. Between the buttresses, in the upper area, is a pair of pointed arch stained glass windows. Penetrating the lower porte-cochere area of this south wall is a pair of pointed arch openings between which is a diamond shaped opening. The south elevation Sanctuary wall within the porte-cochere is broken by a pair of pointed arches recessed into the concrete. The right-most arch contains a pair of

FIGURE 104: SOUTH AND EAST VIEWS OF PORTE COCHERE

SOURCE: WILKMAN HISTORICAL SERVICES

wood and glass square paneled doors. The left arch appears to previously have been equipped with an identical set of doors, however they have been closed off with a wainscot panel below the glass panels.

The balance of the south elevation west of the porte-cochere contains an additional bay flanked on the right by an oriel and on the left by a stepped buttress similar in design to those on the easterly end of the south elevation. In the lower part of this wall is a set of louvered vents capped by a sloping concrete shed roof above which is a pointed arch stained glass window. The three-sided oriel has a stepped molded base and is flanked on the left with what appears to be a concrete ventilation stack or chimney. Below the oriel is a pointed arch topped window.

Sanctuary West Elevation: The west elevation of the Sanctuary is dominated by the Sanctuary's faceted apse centered on this elevation's gable end. Flanking the apse on the right and left are buttresses having two steps topped by sloping caps. The upper part of the apse is dominated by pointed arch stained glass windows, with the center most pair of windows capped by a diamond shaped stained glass window. The basement level of the apse is penetrated by arch topped metal casement windows. To the right of the apse the gable end wall is exposed, revealing a stepped buttress on the right and an arch topped window

FIGURE 105: WEST VIEW OF PORTE COCHERE

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 106: SANCTUARY WEST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 107: SANCTUARY WEST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 108: SANCTUARY NORTH ELEVATION (REAR)

SOURCE: WILKMAN HISTORICAL SERVICES

and rectangular louvered vent. On the left of the apse is an extension of the basement, with arch topped door opening, above and to the left of which is a rectangular window penetrating the ground floor level of this extension. A concrete retaining wall forward of this basement element supports the rear courtyard area.

Sanctuary North Elevation (Rear): Flanking the rear courtyard area is the north elevation of the Sanctuary west of the office wing. This complex elevation includes the north side of the extension mentioned above, penetrated by a single square paneled wooden door above which is a copper canopy. To the left is a faceted extension with a copper roof and single pointed arch stained glass window. To the left of the faceted extension is a shed roofed area capped by a red clay tiles. The westerly end of the main building wall is terminated in a stepped buttress similar to those elsewhere on the building.

Office Wing: The Office Wing was one of the first three building elements constructed on the church campus. This two-story wing bridges the Sanctuary on the south to the Fellowship Hall on the north.

Office Wing East Elevation: The east elevation of the office wing faces onto the front courtyard area. This elevation features an open cloister of pointed arches supported by columns with crocketed capitals. A diaphragm arch is situated at each end. The east elevation of the offices wing has wood framed casement windows. Most of the doors are paneled wood. Above the cloister is a walkway covered by a shed extension to the pitched roof over upper floor. The

covered walkway of the upper floor is supported by simple wooden columns. The exposed rafters of the shed roof have decoratively cut ends.

FIGURE 109: OFFICE WING EAST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

Providing access to the upper floor offices is an intricate concrete staircase element. The staircase element is topped by a double gabled roof. The westerly most gable contains a decorative attic vent made up of clay pipes arranged in the shape of a cross. The easterly most gable has south and north facing pointed top arched openings, supported at the corner by a square column with beveled edges and a crocketed capital with cross motif. A rectangular window penetrates the wall north of the easterly arched opening.

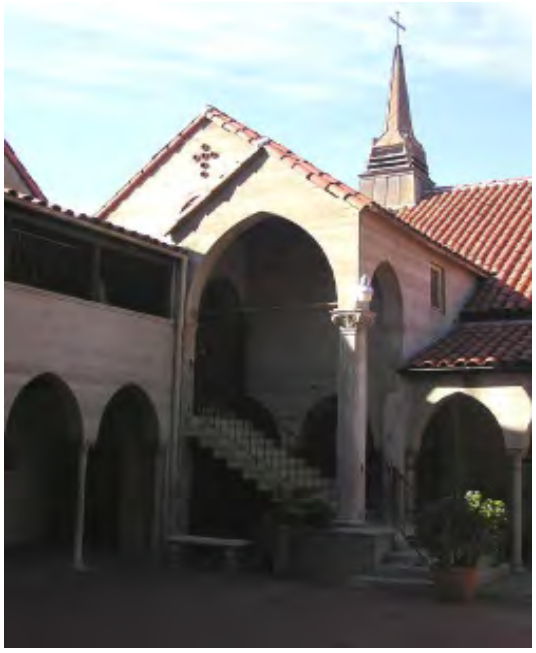


FIGURE 110: OFFICE WING EAST ELEVATION STAIRCASE

Office Wing West Elevation: The west elevation of the office includes two elements. To the south is the west facing wall of the two floor office wing. This elevation includes two dormer style windows on the upper floor and a stepped chimney with brick cap. The lower floor is penetrated by square windows. The upper floor windows are shaded by aluminum awnings. All of the windows in this west-facing building wall have been replaced with modern aluminum framed double glazed windows with dark anodized frames and mullions. To the north of this office element is a gabled extension that encloses a two-story meeting space. The lower floor of this meeting space has a faceted extension dominated by large wood framed windows and roofed with flat red clay tiles. Penetrating this roof is a large electric aluminum roof vent. Access to the meeting space is via

wood and glass doors on the north and south sides. The windows in this upper floor area are modern double glazed types similar to the windows in the west elevation of the offices.

The offices wing terminates into the Fellowship Hall's cloister and southerly roof pitch. This element bridges over a covered passage way that connects the front courtyard to the rear courtyard.

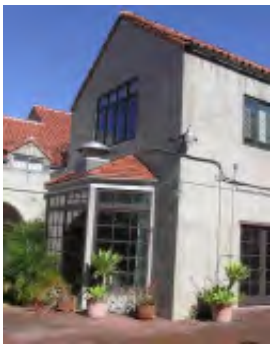


FIGURE 111: OFFICE WING WEST ELEVATION WITH MEETING ROOM EXTENSION

SOURCE: WILKMAN HISTORICAL SERVICES

Fellowship Hall: The Fellowship Hall was among the central elements of the first three buildings constructed on the site. It originally served as the church's Sanctuary.

FIGURE 112: FELLOWSHIP HALL EAST AND SOUTH ELEVATIONS

SOURCE: WILKMAN HISTORICAL SERVICES

Fellowship Hall East Elevation: The east elevation of the Fellowship Hall features a three bay open arcade with pointed arches supported by splayed piers and simple imposts. The splayed archivolt is framed by an intricate surround with a rope, dentil, and angel motif molded into the concrete. Projecting from the concrete gable end above the archivolt are four statues of the evangelists. Each statue is situated on a pedestal featuring the molded symbol of the respective evangelist. From left to right, these are: an angel for Matthew, a lion for Mark, an ox for Luke, and an eagle for John.

Centered above the statues is a circular medallion with a rosette frame surrounding the Lamb of God with the Flag of Calvary. The cornice of the gable features a row of dentils, interspersed with foliate scroll consoles having a cross motif. At the lower left corner of this elevation is a cornerstone inscribed "Jesus Christ Himself the Chief Cornerstone." Centered on this elevation is a pair of square paneled wooden doors with a simple surround molded into the concrete.

FIGURE 113: DETAIL OF FELLOWSHIP HALL EAST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 114: ENTRIES TO FELLOWSHIP HALL SOUTH ELEVATION

Fellowship Hall South Elevation: The south elevation faces onto the front courtyard and is dominated by a cloister penetrated by pointed top arches that are supported by integral concrete columns flanked by half columns with crocketed capitals. Providing natural light through the south elevation wall is a series of rectangular wood framed windows. Toward the east end of the south elevation are two large round vents with clay roof tile grilles. Below these grilles is a pointed arch recess with a single square paneled wood door accessing the Fellowship Hall. At the opposite end of the courtyard facing cloister is a pair of square paneled wood doors that also access the Fellowship Hall. West of these wood doors is a large panel of glass through which one can see the kitchen.

Fellowship Hall North Elevation: The north elevation of the Fellowship Hall is situated above the rear parking area atop a knoll supported by a brick retaining

wall. This elevation exposes the lower level of the Fellowship Hall at the west end. Providing access from the parking lot to this part of the building is a concrete staircase. The south elevation is penetrated by rectangular wood framed casement windows. The plane of this elevation is broken by two projections over which the north slope of the roof breaks to form a shed-like covering. A series of stepped buttresses breaks the expanse of the easterly portion of the north elevation. At the far west end of the lower floor area of this elevation is a large opening that appears to have once been glass, but which has been altered with a wood and glass panel.

Fellowship Hall West Elevation: The west elevation (Figure 115) terminates into Westminster Hall, a classroom building. Visible in this terminus area from the rear parking lot are three rectangular windows and a door that leads into the lower level. Centered on the peak of the Fellowship Hall roof is a copper spire topped by a cross. The west gable end has an attic vent made of clay pipes in the shape of a cross.

FIGURE 115: FELLOWSHIP HALL NORTH AND WEST ELEVATIONS

SOURCE: WILKMAN HISTORICAL SERVICES

Westminster Hall: Westminster Hall was the third element of the first phase of construction in 1936. Unlike the balance of the buildings of this phase, however, Westminster Hall is of conventional stud wall construction, covered in a smooth sand finish stucco in a natural grey color that generally matches the poured concrete walls of the other buildings. Like the other buildings on the site, Westminster Hall has a ground floor that faces an upper courtyard and a lower floor that faces the rear parking lot.

FIGURE 116: WESTMINSTER HALL NORTH ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

Westminster Hall North Elevation: The north eleva-

tion of Westminster Hall is divided into two steps with the westerly most step set back a small distance from the easterly step. The upper and lower floors of this elevation are penetrated by rectangular windows of varying dimensions. Some of these windows are modern aluminum framed double glazed types and others are wood framed fixed glass and casement types. At the far east end of the roof is a single dormer with a wood framed casement window above which is an attic vent made up of clay pipes. The lower floor is accessed by doors of varying styles. Extending midway from this elevation at the break area is a shed roofed extension covered in red clay tiles. Westminster Hall provides day-care services and, adjacent to the parking lot is a play area enclosed by a wrought iron fence.

FIGURE 117: WESTMINSTER HALL WEST ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

FIGURE 118: CLOISTER FROM WESTMINSTER HALL TO CHRISTIAN EDUCATION

SOURCE: WILKMAN HISTORICAL SERVICES

Westminster Hall West Elevation: The west elevation of Westminster Hall is a two story gabled wall. This wall has square windows in the upper and lower floors and a single wood paneled door centered on the lower level. The door has an arched surround. In the upper gable end is a rectangular attic vent made up of clay pipes. All of the window openings have been retrofitted with modern aluminum framed dual glazed glass windows.

Bridging Westminster Hall to the Christian Education building (Figure 118) is a red clay tile roofed cloister. A basement below the cloister is revealed in the

easterly facet. This portion of the basement has poured concrete walls penetrated by one window and one door. The easterly portion of the upper cloister wall is broken by a series of three plaster finished bays separated by concrete columns. The two outer bays are penetrated by rectangular wood framed windows. The westerly upper facet is a solid wall with no fenestration.

FIGURE 119: WESTMINSTER HALL SOUTH ELEVATION

SOURCE: WILKMAN HISTORICAL SERVICES

Westminster Hall South Elevation: The south elevation of Westminster Hall reveals a walkway covered by a shed extension of the building's roof. At the easterly end of this south facing roof is a dormer with a modern dual glazed aluminum framed glass window and an attic vent made up of clay pipes. At the westerly end of the roof is a chimney with a decorative brick cap. Supporting the walkway are simple square concrete columns. A series of square paneled wood doors and wood framed casement windows provide access and light to the rooms that are located in this area. The square concrete columns continue around to the cloister leading to the Christian Education building. Flanking the covered walkway and bridge is a courtyard with a children's play area enclosed in a modern wrought iron fence. Paving in the courtyard and walkway areas is a combination of brick and concrete.

FIGURE 120: CHRISTIAN EDUCATION NORTH ELEVATION, WESTERLY END

SOURCE: WILKMAN HISTORICAL SERVICES

To the east of Westminster Hall's south elevation is the terminus of the passageway between the front and rear courtyards. This terminus is dominated by a

pointed arch, above which is a balcony with wrought iron railing.

Christian Education Building: The Christian Education building was added in 1962. It is a simple rectangular two story frame structure with walls covered in smooth plaster. Like the Fellowship Hall and Westminster Hall, it exposes its lower floor only on the frontages of the rear parking area. Unlike the other buildings on the site, its gabled roof is covered in red asphalt shingles. The overhangs of the roof have wooden bargeboards that hide the roof's rafters.

FIGURE 121: CHRISTIAN EDUCATION NORTH ELEVATION, EASTERLY END

SOURCE: WILKMAN HISTORICAL SERVICES

Christian Education Building North Elevation: The westerly portion of the north elevation fronts onto the parking lot oriented children's play area, enclosed in modern wrought iron fencing. This building wall is penetrated by rectangular aluminum framed windows providing light to the upper and lower floors.

The easterly portion of the north elevation fronts onto the rear courtyard. Its smooth plaster wall is penetrated by wood and glass windows and doors on the easterly end and by aluminum framed rectangular glass windows on its westerly end.

Christian Education Building West and East Elevations: The west and east elevations essentially mirror each other, expressing themselves with notched areas on either side of the gable ends and simple solid wood doors, aluminum framed windows and copper ventilation grilles.

Christian Education Building South Elevation: The south elevation butts directly up to the parking lot and is penetrated by simple rectangular aluminum framed glass windows on both upper and lower floors and by and a single pair of solid wood doors centered on the elevation.

Church Stairs, Tunnel, Pathway: Situated where the north elevations of Westminster Hall and the Fellowship Hall meet is a set of stairs that lead to a concrete pipe tunnel that extends under the northerly perimeter church drive. The tunnel exits to a pathway within a small northwesterly facing remnant of the Tequesquite Arroyo. A poured-in-place concrete retaining wall on the north side of the perimeter driveway

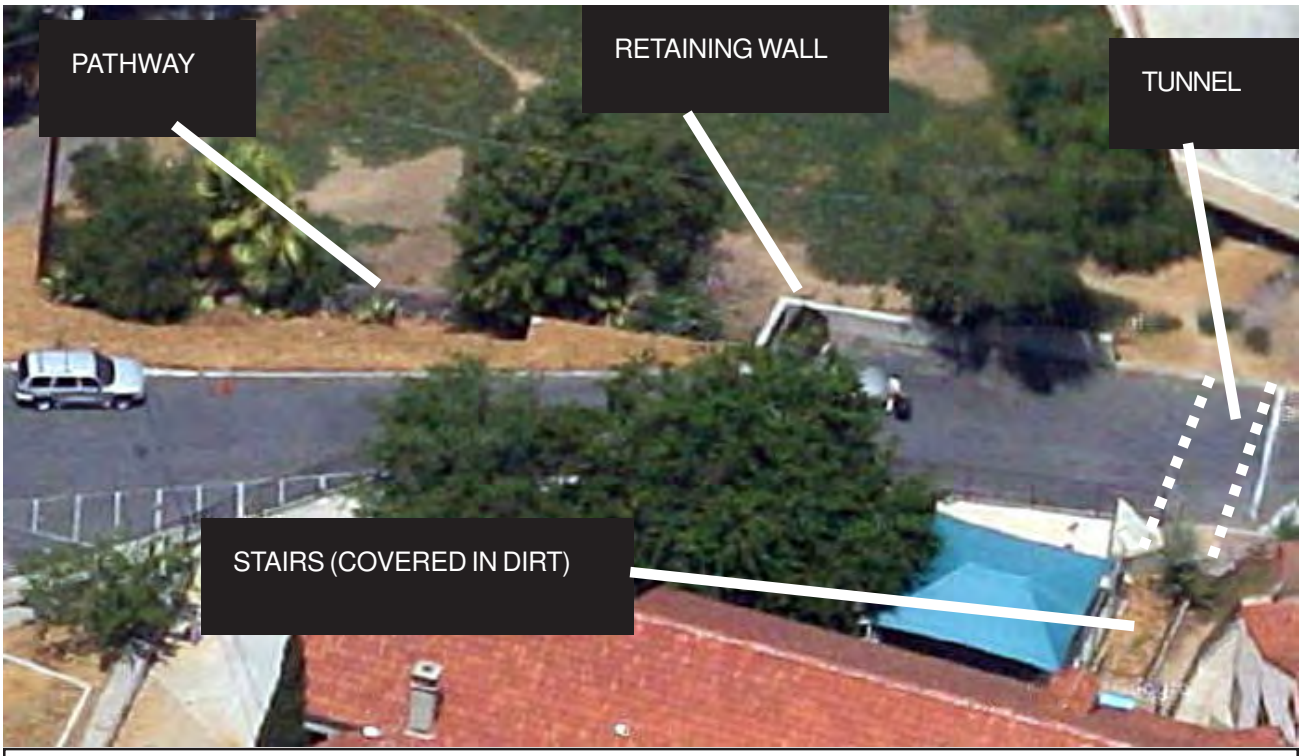


FIGURE 122: STAIRS, TUNNEL, PATHWAY FEATURE

SOURCE: WILKMAN HISTORICAL SERVICES

serves to stabilize the slope below the driveway. The above mentioned pathway runs parallel to the driveway above and is defined by low concrete and concrete block walls. Chain link fencing also helps define the pathway.

FIGURE 123: TUNNEL OUTLET TODAY

SOURCE: GINI AUSTERMAN, MA, RPA

Several long-term church members contacted by WHS were not aware of the history of this feature. Eventually, former Calvary Presbyterian Church pastor Dean Kokjer came forth with the answer. According to Pastor Kokjer, the improvements were built c.1936 to provide access to the Evans

FIGURE 124: STAIRS, TUNNEL, PATHWAY FEATURE - c. 1955

SOURCE: WILKMAN HISTORICAL SERVICES

Athletic Park and to an off-site parking area in the vicinity of the park. As such, this feature provides evidence of a part of the church's history that has been forgotten by even some of the veteran members of the church. Pastor Kokjer said the stairs and tunnel were made inaccessible by fill dirt in 2002 to reduce malicious mischief related to the remote improvements. The tunnel is also blocked on both sides by chain link fencing. (Email, Dean Kokjer, 6-9-2013)

c. Historical Significance - Calvary Presbyterian Church:

Calvary Presbyterian Church appears to be eligible for listing on the National Register of Historic Places at the Local Level, earning it a CHR Status Code of 3S (Appear eligible for NR through survey evaluation.) It is also eligible for City of Riverside designation as a Cultural Heritage Landmark. Its status as a National Register eligible property also makes it eligible for listing on the California Register of Historical Resources.

Calvary Presbyterian Church has been surveyed three times in the past, but none of these surveys was accomplished at an intensive level. The following is a summary of these surveys:

1977: This undated survey was completed c. 1977 by volunteers supervised by Charles Hall Page & Associates, Inc. The Page survey was the City's earliest historical survey accomplished at a time when uniform standards for evaluating

historical resources were in their infancy. While it records the basic resource, it makes no conclusion regarding its eligibility for historical designation.

1980: In 1980, the church was surveyed on State Department of Parks and Recreation Historic Resources Inventory forms and submitted to the State for inclusion on the State's Historic Resources Inventory. This survey found the church significant for both its architecture and its association with prominent architect Carleton Monroe Winslow, and it was accepted to the State Historical Resources Inventory on that basis. The survey did not, however, place the church in a particular category of historical designation. Nonetheless, on the basis of this survey, the church was designated a Structure of Merit at the Cultural Heritage Board's October 7, 1981 meeting.

2003: In 2003, the church was again surveyed by Myra Frank and Associates as part of the City's effort to product a new Downtown Specific Plan. This reconnaissance level survey resulted in a "3S" Status Code, signifying a determination that it appears eligible for National Register of Historic Places listing.

2009: In 2009, WHS again surveyed the property and again found it eligible for the National Register.

The present survey, conducted at an intensive level, concurs with the 2003 and 2009 survey findings of National Register eligibility. Its qualification for listing on the National Register is based upon National Register of Historic Resources Criterion C as follows:

C. Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.

In support of this conclusion, it is noted that Calvary Presbyterian Church is one of the more prominent board-formed concrete structures in the City of Riverside and the City's only large-scale Gothic Revival church. Other board-formed concrete structures of similar complexity and stature in the City of Riverside include the Rotunda Wing of the Mission Inn and the Municipal Auditorium, both in the downtown area. The craftsmanship, high level of design detail, and overall excellent condition of the church complex are exceptional, qualifying the church as an expression of high artistic value. Having been designed by prominent architect Carleton Monroe Winslow, the church also qualifies for listing as the work of a "master." Winslow is recognized as a highly accomplished architect of ecclesiastical design as is documented in the Historic Context section.

Calvary Presbyterian Church also possesses a high level of historical and architectural integrity. In this regard it strongly embodies National Register aspects of integrity including those of location, design, materials, workmanship, feeling, and association. Materials integrity issues are limited to window openings that have been retrofitted with

modern aluminum framed dual glazed windows. The retrofits are not obvious, using dark anodized aluminum frames and mullions and divided lights similar to the original windows. All of the new windows are in areas with south and west exposures where heat penetration can be a problem. Integrity of setting has been somewhat compromised by the growth of the hospital and it could be further compromised by the proposed Phase II Bed Tower, depending upon the final design of this building. Design guidelines and mitigation measures are presented later in this report to address any concerns over integrity of setting.

The following additional information pertains to this building:

- **Period of Significance:** 1935-1955, the period during which the core church campus was constructed.
- **Significance Theme:** Churches in the City of Riverside
- **Contributors:**

  √ Sanctuary
  √ Office Wing
  √ Fellowship Hall
  √ Westminster Hall
  √ The front entry design, including its parking layout, courtyard, and front setback along with all mature trees in these areas
  √ All retaining walls, iron gates and railings.
  √ The stairs, tunnel, and pathway linking the church property with the former Evans Athletic Park and nearby off-site parking area.

- **Character Defining Features:**

  √ All natural concrete board formed building walls and decorative features.
  √ All original windows and doors.
  √ All stained glass.
  √ All clay tile roofing and building vents.
  √ All metal decorative elements, including the Sanctuary cross and spire and the Fellowship Hall cupola.

It was not within the scope of this work to survey the interiors of the Sanctuary and Fellowship Hall; however, these may be contributors and should be surveyed before any application is made for National Register listing. The Christian Education building is generally utilitarian in design and lacks the architectural quality of the other buildings on the campus. It is, therefore, not a contributor.

17. Historic Resources Across Public Rights-of-Way

a. Chinatown

FIGURE 125: AERIAL VIEW OF CHINATOWN

SOURCE: USDA

As documented earlier in this report, the approximately 2.5 acre site of Riverside's Chinatown is located across Brockton Avenue from the hospital at the northwest corner of Brockton and Tequesquite Avenues. The Chinatown site is the eastern portion of a larger property where a village of Chinese immigrants existed from 1885 until the 1930s. Chinese immigrants performed important tasks that helped in the establishment of Riverside. These included work on railroads and laboring in Riverside's major economic engine, the citrus industry. Chinese immigrants also performed many other services in the City or Riverside. Beginning in 1943, and until his death in 1974, Mr. George Wong (Wong Ho Luen) owned the site and lived there alone.

Chinatown was originally recorded in 1968 as a California Point of Historical Interest, Number RIV-008; at the time of this recording, the site was listed as a seven-acre settlement founded in 1886 by Duey Wo Lung, a pioneer Chinese resident of Riverside. The site was recorded in 1980 as a result of a survey conducted by Dr. Nancy Wey with the Chinese American Survey of San Jose, California. Dr. Wey recorded the site as The Site of Historic Chinese American Community, or 'Chinatown'. She noted that the last buildings of Chinatown were demolished in 1977 to make way for a parking lot that was subsequently not built. The last standing buildings consisted of a series of six adjacent buildings that shared common walls.

After Mr. Wong's death in 1974, the site changed hands several times and in 1979 was acquired by the Riverside County Office of the Superintendent of Schools. Plans by County Schools to lease the site for a parking lot in 1984 led to a grass-roots citizens' movement to halt construction of the parking lot until an archaeological study could be conducted.

In 1985, a non-profit research organization, the Great Basin Foundation, conducted an exploratory excavation of a small section of the site. This excavation established that brick foundations still exist below ground. A large portion of the original 7-acre plot was by then occupied by a County Schools maintenance and operations facility. The test excavation confirmed the Chinatown proper as being the 2.5-acres east of the maintenance and operations facility's improvements.

The Chinatown site was nominated for inclusion to the National Register of Historic Places in 1990. The site had been looted by pot-hunters over the years prior to the nomination. Some of these artifacts were returned to, and are curated at the Archaeological Research Unit at UCR.

b. Grant School

FIGURE 126: GRANT SCHOOL

SOURCE: CITY OF RIVERSIDE HISTORIC RESOURCES DATABASE

Grant School is situated at the northeast corner of Brockton Avenue and Fourteenth Street. The present building is located on the site of one of Riverside's early schools, an 1889 three-story brick Victorian style building known during its first years as the 14th Street School. In these years, the first and second stories of the Fourteenth Street school accommodated elementary grades, while the third story housed Riverside's first high school. The school was renamed Grant School in 1901 when the high school moved to a new site. (http://olmsted.riversideca.gov/historic/ ppty_mtp.aspx?pky=2690, Accessed 2013)

Graduates of the high school who went on to prominence included class of 1892 graduate Ray Lyman Wilbur (President of Stanford and Secretary of the Interior), 1894 graduate Loye Holmes Miller (a famous zoologist who assisted with the archeological investigation of the La Brea Tar Pits), and 1893 graduate Marcella Craft (singer with the Royal Opera in Munich and later an organizer of the Riverside Opera Association).

After the 1933 Long Beach-Compton earthquake the unreinforced masonry Victorian school building was razed and the current building was constructed on the same site. The new Spanish Colonial Revival style building was designed by prominent local architect G. Stanley Wilson in association with Albert Haight. Remaining on the site from the old 14th Street School are some of the Victorian building's granite retaining walls and a cast iron fountain. In 1978, Grant School was designated City of Riverside Cultural Heritage Landmark Number 38. A 2003 historic resources survey conducted by Myra Frank and Associates found the property eligible for the National Register of Historic Places.(Ibid)

c. Newman Park

Newman Park is a small green space located at the southeast corner of Fourteenth Street and Magnolia Avenue. Newman Park came about as a result of the extension of Magnolia Avenue across the Tequesquite Arroyo in 1913. The fill that accommodated this extension split off a small remnant of land that had once been a part of G.O. Newman's larger farm property. In 1916, Mr. Newman donated the tiny two tenths of an acre remnant to the City of Riverside which subsequently improved it as a park. The park was named Newman Park, in honor of its donor.

Among the improvements in the park is a grove of palm trees donated to the City by world famous authority on palms, J. Harrison Wright, a resident of Riverside. Wright had a ranch on Adams Street on land later developed with the Adams Plaza Shopping Center. On the ranch, he grew numerous species of palms and was sought out for his expertise on these plants. Different figures are given for the number of palm trees transplanted from the Wright Ranch to Newman Park, but it appears that the number ranges between 45 and 50. The palms were transplanted in 1916.

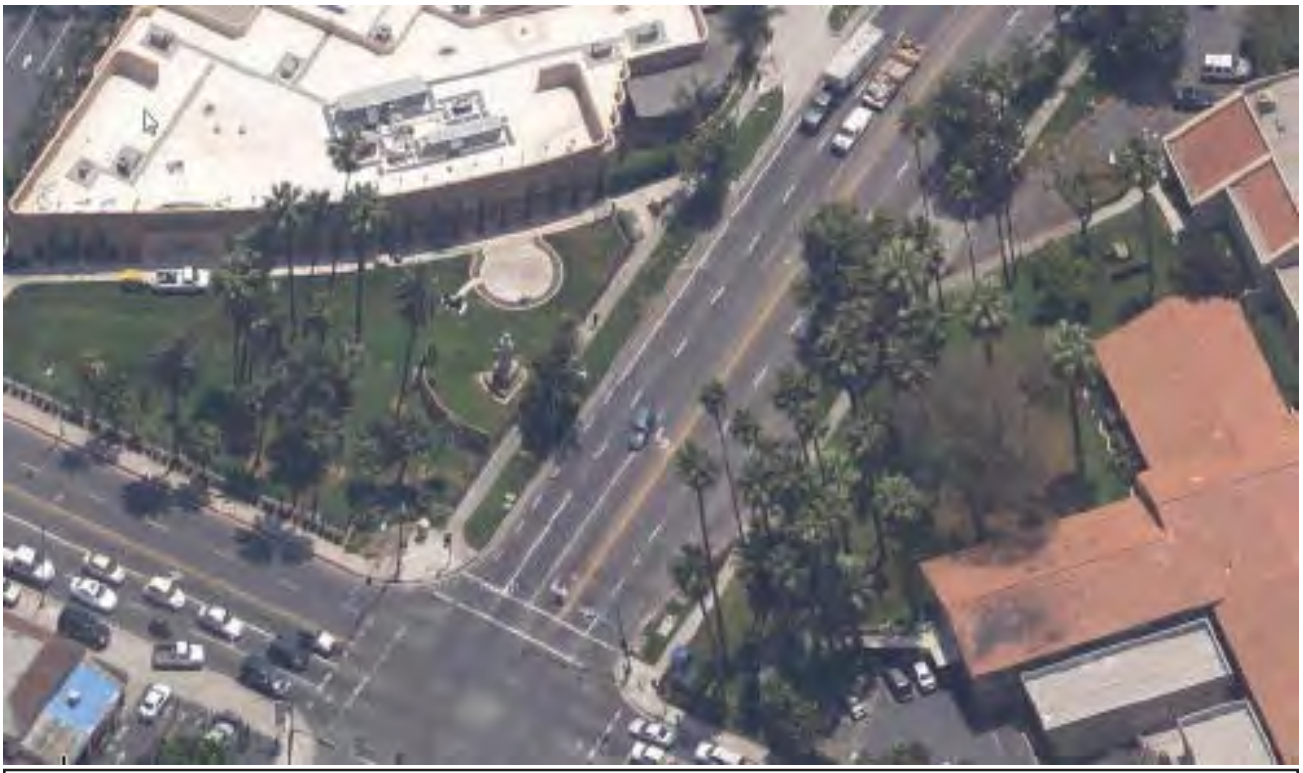


FIGURE 127: NEWMAN PARK PALM GROVE IN RELATION TO RCH PALM GROVE

SOURCE: WWW.MAPS.GOOGLE.COM

Later in 1925, Wright donated numerous palms to Riverside Community Hospital for its initial landscaping of the site. The transplanted palms created a balanced landscaped entry feature at the intersection of Magnolia Avenue and Fourteenth Street. Figure 127 is a birdseye view showing the groves on both sides of the street.

Later, during the Great Depression, the Works Progress Administration commissioned Sherry Peticolas to sculpt a statue of Juan Bautista de Anza, the famous explorer documented to have been among the first Europeans to pass through Riverside. The Riverside Art Association, under the leadership of Thelma Rogers Kessinger, collected $5,000 to cover a portion of the statue's cost.

According to Jane Davies Gunther in her book *Riverside County California Place Names,* Riverside resident and fifth generation Anza descendent Fred Loustaunau is said to have posed for the statue. (Gunther 1983: 351) Tom Patterson, in his book *Landmarks of Riverside* credits Edward Loustaunau as the person who posed for the statue. (Patterson 1964: 175) WHS did not find a record of a Fred Loustaunau living in Riverside, however, WHS did find a record of a Francisco Yslas "Frank" Loustaunau in the 1910 Federal Census living on the east side of Brockton Avenue, south of Fourteenth Street in the area of Hospital Building L. Edward Loustaunau, Frank's son,

also lived in this area. Frank died in 1932, so he could not have posed for the statue. Edward would have been about 26-years-old when the statue was completed, making him the likely model. The statue was oriented toward the Tequesquite Arroyo the path used by Anza in his expedition through Riverside in 1774 and later in 1775-76. (Gunther 1984: 350-351)

d. Old Magnolia Avenue Trolley Line and Refuse Dump:

As documented earlier in this report, this site consists of the old Magnolia Avenue trolley line and a refuse deposit located south of 14th Street in the vicinity of Magnolia Avenue. The site is located on land that was created in 1913 when a segment of the Tequesquite Arroyo was filled to accommodate road construction. The fill dirt was 14 feet deep; therefore artifacts recovered below this depth represented domestic refuse deposits that predated the 1913 construction project.

The site was recorded in 1996 by CRM Tech, which conducted a test excavation trench in the site. The test trench revealed that historic refuse was at least 15 feet deep and is now buried below Newman Park and adjacent street improvements. The majority of the materials uncovered in the test excavation consisted of bricks, bottle glass, ceramic, and iron artifacts. The true extent of the site, both vertically and horizontally, was not determined by the testing program. (Love and Tang 1995)

The artifacts recovered dated as early as 1895. The test program and artifact analysis conducted by CRM Tech suggests, given the location of the site on the edge of Riverside's original downtown (Mile Square) that the refuse deposit could likely have been the location of the early town dump. CRM Tech concluded that the site held very high research potential for interpreting turn-of-the-century economics and lifestyle of Riverside. (Ibid)

18. Impacts to Cultural Resources

The sub-sections below address the degree to which what is known about the Riverside Community Hospital Specific Plan would impact cultural resources. This report determined that there are eight historic resources that could be impacted by the Riverside Community Hospital Specific Plan. These are the J. Harrison Wright Palm Grove, Building B, the Chinatown Site, Riverside Community Players, Calvary Presbyterian Church, Grant School, Newman Park, and the Old Magnolia Trolley Line and Refuse Dump.

At this point, other than the hospital tower that will be built in the area of Building N, we know nothing about the particulars of the proposed buildings on the hospital property. Other improvements or alterations, not currently formulated, may also develop that could impact cultural resources. To the degree possible, all of these potential impacts are addressed in the Recommendations and Mitigation Measures section that follows this section.

a. J. Harrison Wright Palm Grove

This report determined that the palm grove at the southwest corner of Magnolia Avenue and Fourteenth Street qualifies for City of Riverside Cultural Heritage Landmark status as a cultural landscape. The palms in the grove were donated to the hospital by renowned palm tree authority and Riverside resident J. Harrison Wright and were clustered at the corner to balance with the historic palm grove in Newman Park across Magnolia Avenue.

The main concern in regard to this resource is its relationship to the proposed multi-story building and parking area proposed for the site of Building A. Building A, while not a historic resource, provides an important sense of setting for the palm grove and it is important that any future building in that area be respectful of the historic relationship between building and landscaping in that area.

b. Building B

Building B is situated in roughly the center of the upper hospital campus near Magnolia Avenue, and it currently serves as the hospital's main bed tower. WHS found this building to be eligible for listing in the California Register of Historical Resources. Building B is an excellent example of Mid-Century Modern architecture by a renowned local architect, Herman O. Ruhnau. To bring Building B into compliance with current seismic standards, alterations will be necessary that may impact character defining features. It will be important to design any such alterations to preserve as much as possible the architectural integrity of the building.

c. Chinatown Site

The Chinatown site, located at the northwest corner of Brockton and Tequesquite Avenues is a City of Riverside Cultural Heritage Landmark and it is eligible for listing in the National Register of Historic Places. The Chinatown site is significant for its potential to yield information important to the history of Chinese immigrants in Riverside.

While there is no direct evidence of Chinatown-related uses of the hospital property, the location of Chinatown across Brockton Avenue from the hospital site leaves open the possibility that evidence of Chinatown's history my lie below the ground on the hospital site. This concern was raised in the cultural resources report related to the Building O medical offices structure and the Building P Parking structure now under construction. (WHS 2013) To address the potential of archaeological evidence below the ground on the hospital site, the grading of this site was monitored by a qualified archaeologist.

d. Riverside Community Players

The Riverside Community Players, situated at 4026 Fourteenth Street, toward the northwest corner of the hospital site, qualifies for local designation as a Structure of Merit. While the architectural integrity of the existing building on the site has been

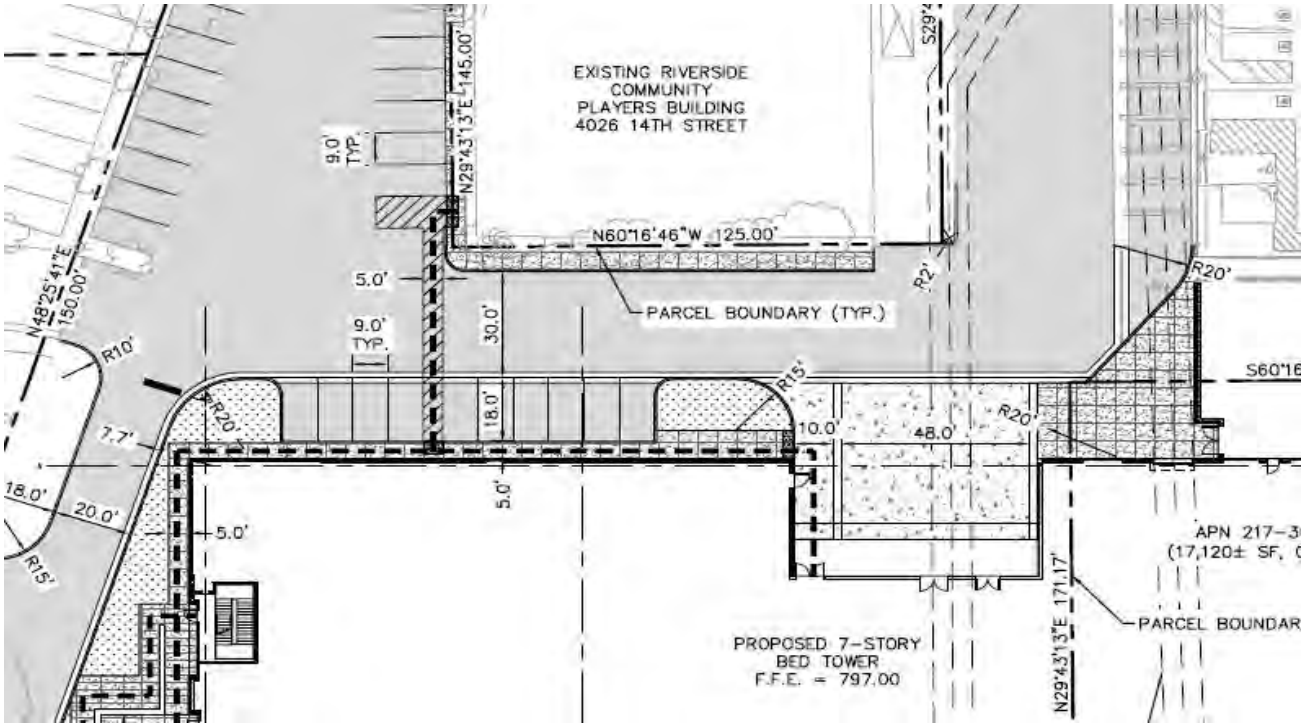


FIGURE 128: PLOT PLAN - HOSPITAL TOWER IN RELATION TO COMMUNITY PLAYERS BUILDING

SOURCE: PERKINS + WILL

compromised by later additions, the Players is among the longest continuous operating theater groups in the USA.

Immediately south of the Community Players building, the hospital proposes to build a seven-story Hospital Tower. The most significant potential adverse impact from the Hospital Tower would be the loss of parking in near proximity to the theater. Presently, an abundance of surface parking south of the theater directly serves theater patrons. An agreement between the Community Players and the Community Hospital requires that "...at least at least 150 parking spaces remain within the Hospital Tract or alternative real property with at least 100 of such spaces located within 300 feet of the Players Tract..." Once ground is broken for the new Hospital Tower, parking now being used by theater patrons will no longer be available. Many of the theater patrons are elderly and continued patronage of the theater by these people is dependent upon convenient, easily accessible parking.

Another impact from the proposed hospital tower is its seven-story height relative to the one- to two-story height of the theater. Mitigating this to some degree is the two-step design of the building, placing a lower element closer to the theater, with the tower itself located about 30 feet back from the lower element. As such, the tallest part of the Hospital Tower is proposed to be about 90-feet from the Community Players building.

FIGURE 129: PERSPECTIVE - HOSPITAL TOWER IN RELATION TO COMMUNITY PLAYERS BUILDING

SOURCE: PERKINS + WILL

Nonetheless, the significant difference between the heights of the two buildings will be an impact that will need to be mitigated.

e. Calvary Presbyterian Church

Calvary Presbyterian Church, situated along Magnolia Avenue south of the hospital campus, qualifies for listing on the National Register of Historic Places and it is a designated City of Riverside Structure of Merit. Its significance relates mainly to its Gothic Revival architecture which rivals any other example in Riverside.

The improvement most likely to have an impact on Calvary Presbyterian Church is the two phase future bed tower building in the area now occupied by the Buildings I and J parking structures. It will be important that the scale and materials used on this building be sensitive to the church and that perimeter site improvements and landscaping complement soften the view from the church toward the building.

f. Grant School, 4011 Fourteenth Street

Located at the northeast corner of Brockton Avenue and Fourteenth Street, Grant School is a City of Riverside Cultural Heritage Landmark and is eligible for listing in the National Register of Historic Places. Its significance relates to its architecture and its association with prominent architect G. Stanley Wilson.

Grant school is located across Fourteenth Street from the hospital property and none of the improvements currently being proposed appear capable of causing an adverse impact to this cultural resource. Should any substantial improvements be proposed along Fourteenth Street across from Grant School, however, potential adverse impacts will need to be addressed.

g. Newman Park

Situated at the southeast corner of Magnolia Avenue and Fourteenth Street, Newman Park is a City of Riverside Cultural Heritage Landmark. The park's significance derives from its palm grove, donated by renowned palm authority and Riverside J. Harrison Wright and its art deco style monument to Juan Bautista de Anza.

Newman Park could be impacted by the proposed multi-story building in the area of Building A at the northeast corner of the hospital property. Important in this regard, is the relationship between the J. Harrison Wright palm grove in Newman Park and the J. Harrison Wright palm grove at the northeast corner of the hospital site. An important aspect of the Newman Park palm grove is the balance achieved between it and the J. Harrison Wright palm grove on the hospital property. Also important is the scale of building improvements at that corner. Mitigation measures and recommendations intended to protect the J. Harrison Wright palm grove on the hospital property will also serve to protect the grove in Newman Park.

h. Old Magnolia Avenue Trolley Line and Refuse Dump

Located in the vicinity of Magnolia Avenue and Fourteenth Street, the Old Magnolia Avenue Trolley Line and Refuse Dump qualifies for historic resource status for its archaeological potential. Test explorations of the site have uncovered many artifacts from Riverside's early history, deposited when the area was a local town dump.

There is a relatively close proximity between this archaeological site and the multi-story building proposed for the southwest corner of Magnolia Avenue and Fourteenth Street. Undiscovered subsurface cultural resources related to the Old Magnolia Avenue Trolley Line and Refuse Dump may exist in this area.

19. Recommendations and Mitigation Measures

The following mitigation measures will reduce the impacts to cultural resources to level of less than significant. Implementation specifics will be subject to review and approval of the Planning Division staff and/or Cultural Heritage Board in accordance with Title 20 of the Riverside Municipal Code:

a. J. Harrison Wright Palm Grove

1. Establish a landscape setback that preserves, to the largest extent possible the trees in the J. Harrison Wright Palm Grove, with the frontage of the landscape setback to extend from the east frontage of Building H to the parking lot at the southwest corner of Magnolia Avenue and Fourteenth Street. If necessary for the efficiency of the design of the building that replaces Building A, a small number of palms may be relocated within the defined setback area.
2. The building that replaces Building A should be of contemporary design, but should be sensitive in design, color, and materials to the landscaped setback. If the building has a direct frontage on the palm grove landscaped setback, design the building to step down to one story at the edge of the palm grove, with a design that provides a compatible backdrop for the historic landscape.
3. Design the site plan for the building that replaces Building A so it has a building edge or building-like edge adjacent to the palm grove. A building-like edge could consist of an arcade type structure similar in concept to that used along the Market Street frontage of the shopping center on the west side of Market Street, between Third and Fourth Streets. If such an arcade-like feature is used, it should be of an architectural style in keeping with the building behind it.
4. Design and install a plaque and interpretive feature with prominent public access in the palm grove, telling the history of J. Harrison Wright and his association with the landscaping of the hospital and Newman Park.

b. Building B

1. To the largest extent possible, maintain the architectural integrity of Building B by preserving its character defining features. If replacement of character defining features becomes necessary, the replacements should maintain the appearance of the original materials.
2. To the extent feasible, locate seismic reinforcement within the interior of the building. To the extent that seismic reinforcement needs to be accomplished on the exterior of the building, design it to blend as much as possible with the existing building. For example any seismic wrap necessary on the building should protrude from the building face as little as possible and should be similar in color and texture to the existing building.
3. Maintain the lacy look provided by the Lemon Scented Gum Eucalyptus trees south of Building B through preservation or relocation of existing

trees or through the replacement of existing trees with specimen trees of the same variety.

4. Preserve all rock walls and seating areas associated with Building B's landscape. If new improvements necessitate the removal of some rock walls, build replacement walls having the same appearance as the original walls.

c. Chinatown Site

1. Follow the recommendations in the report prepared by the archaeologist monitoring the grading associated with Buildings O and P.

d. Riverside Community Players

1. Before ground is broken for the new Hospital Tower, provide improved parking for Community Players theater patrons in accordance with the agreement between the Riverside Community Hospital and Riverside Community Players. Many of the theater patrons are elderly, so such parking needs to be located as much as possible near the theater and at the same general grade as the theater.
2. If possible, pave and stripe the area below Building G to provide added parking near the theater.
3. Develop with the theater management, a means for assuring access to convenient parking when performances are scheduled.
4. Narrow the planter areas shown on the plot plan east and west of the parking bay along the north face of the Hospital Tower and use the space gained to create four or five finger planters to break up the expanse of parking. In these planters, specify a tree variety that will help soften the view to the lower part of the building.

e. Calvary Presbyterian Church.

1. Adhere to the following design guidelines in regard to the design of the Phase II Bed Tower:
   a. The building should be a contemporary design, but be sensitive to the adjacent church in the placement of height, massing, landscaping, and in the use of materials.
   b. Design the building to step up in height, beginning with lower elements at the south and east elevations, progressing to higher elements toward the north and west.
   c. Refrain from the extensive use of highly reflective building materials in lower parts of the building.
   d. Use shading devices similar in concept to those used on Building B so as to soften the view to windows and provide a sense of depth to the building.
   e. Design the landscaping around the south and east sides of the

building to create a landscape filter at both the lower and higher elevations. The type of trees used in the parking lot for Building B is a good example of the type of landscaping that would effectively soften the view to the Phase II Bed Tower.

f. Grant School

1. There is no need for mitigation measures relating to Grant School at this time. However, should any improvements be proposed along Fourteenth Street across from Grant School, these should be designed so as to be sensitive to the setbacks and nature of improvements on the Grant School property.

g. Newman Park

1. The mitigation measures listed in relation to the J. Harrison Wright palm grove apply equally to Newman Park.

h. Old Magnolia Avenue Trolley Line and Refuse Dump

1. Engage the services of an archaeologist who meets Secretary of Interior Professional Qualifications to monitor any on site grading in the vicinity of Fourteenth Street and Magnolia Avenue.

i. Overall Project

1. In a prominent public place, develop an interpretive feature telling the story of Riverside Community Hospital. This history should include the use of the property for farming, athletic fields, and its ultimate development as a major medical center.

20. Resources

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Persons Consulted:

Virginia Austerman, Archaeologist
Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
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Cultural Resources Survey and Evaluation
Riverside Community Hospital Specific Plan
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Volume Two: Appendices

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Cultural Resources Survey and Evaluation
Riverside Community Hospital Specific Plan

4445 Magnolia Avenue, Riverside, CA
Volume Two - Appendices

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Appendix A: Qualifications of Consultants

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ABOUT WILKMAN HISTORICAL SERVICES:

Wilkman Historical Services is a sole proprietorship specializing in the research and evaluation of individual and small groupings of potential historic resources. I bring to my practice 32 years experience as a city planner with the City of Riverside. The last 6 years of my career included 2 years as acting Historic Preservation Manager and 4 years as supervisor of the City's Historic Preservation Section. I meet the Secretary of Interior Professional Qualifications for Architectural Historian. With my knowledge of city development processes, historic resource programs, and realities of day-to-day decision making, I can provide historical evaluation services that are both highly professional and realistic.

EDUCATION:

1968 B.A. Sociology, Urban Studies Emphasis, California State University Northridge
1970 Masters of Urban Planning, Urban History/Architecture Emphasis, Michigan State University

PROFESSIONAL EXPERIENCE:

1968-1970 City Planner, City of East Lansing, Michigan
1971 City Planner, City of Riverside, CA
1972-1974 Specialist Fourth Class, United States Army, Washington D.C.
1974-1996 City Planner, City of Riverside, CA
1996-1998 City Planner and Acting Historic Preservation Manager, City of Riverside, CA
1998-2003 City Planner and Supervisor, Historic Preservation Section, City of Riverside, CA
2003-Present Owner, Wilkman Historical Services, Riverside, CA

PROFESSIONAL MEMBERSHIPS:

California Preservation Foundation
Society of Architectural Historians, Southern California Chapter
National Trust for Historic Preservation
Board of Trustees, Mission Inn Foundation

SIGNIFICANT HISTORIC RESOURCES RELATED WORK:

1975 Arlanza La Sierra Community Plan, Riverside, CA
1977 Northside Community Plan, Riverside, CA
1985 Historic Seventh Street Study, Riverside, CA
1992 Prospect Place Historic District Background Report, Riverside, CA
1994 Downtown Riverside Design Guidelines, Riverside, CA
1995 Revised Arlanza La Sierra Community Plan, Riverside, CA

1999 Arlington Community Plan, Riverside, CA
1999 Magnolia Avenue Study, Riverside, CA
2000 Riverside Historic Preservation Database, Riverside, CA
2001 Supervision, Eastside and Casa Blanca Surveys, Riverside, CA
2002 Historic Preservation Element of the General Plan, Riverside, CA
2002 Oral Histories, Eastside and Casa Blanca Historic Surveys, Riverside, CA
2003 Downtown Riverside Specific Plan, Riverside, CA
2003 Market Place Specific Plan Update, Riverside, CA
2004 Oral Histories, Arlington Community Historic Survey, Riverside, CA
2004 Cultural Resources Evaluation, 5156 Colina Way, Riverside, CA
2004 Cultural Resources Evaluation, 4480 Mission Inn Ave, Riverside CA
2004 Cultural Resources Evaluation, 4648 Ladera Lane, Riverside, CA
2005 Cultural Resources Evaluation, 4654 Sierra Street, Riverside, CA
2005 Cultural Resources Evaluation, 5173 Colina Way, Riverside, CA
2005 Oral Histories, Northside Historic Survey, Riverside, CA
2006 Historic Research Services to the law firm of Best Best & Krieger, Riverside, CA
2007 Historic Research Services to the law firm of Best Best & Krieger, Riverside, CA
2007 Cultural Resources Evaluation 4779 Tequesquite Avenue, Riverside CA
2007 Mills Act Application, Streeter Tea House, 5211 Central Avenue, Riverside, CA
2007 Cultural Resources Evaluation, 5250-5290 Golden Avenue, Riverside, CA
2007 Cultural Resources Evaluation, 4915 La Sierra Avenue, Riverside, CA
2007 Cultural Resources Evaluation, 4158 Larchwood Place, Riverside, CA
2007 Cultural Resources Evaluation, 7530 Evans Street, Riverside, CA
2008 Historic Research Services to the law firm of Best Best & Krieger, Riverside, CA
2008 Cultural Resources Evaluation, Fire Station One, 3420 Mission Inn Avenue, Riverside, CA
2008 Cultural Resources Evaluation, Realignment of La Sierra Avenue at Five Points, Riverside, CA
2008 Cultural Resources Evaluation, 4952 La Sierra Avenue, Riverside, CA
2008 Cultural Resources Evaluation, 601 N. Grand Avenue, Glendora, CA
2008 Cultural Resources Services to the City of Norco, CA
2008 Cultural Resources Evaluation, 3909-3919 Terracina Drive, Riverside, CA
2008 Cultural Resources Evaluation, All Saints Episcopal Church, 3874 Terracina Drive, Riverside, CA
2009 Historic Research Services to the law firm of Best Best & Krieger, Riverside, CA
2009 Cultural Resources Services to the City of Norco, CA
2009 Cultural Resources Evaluation and Impacts Assessment, Riverside Community Hospital, 4445 Magnolia Avenue, Riverside, CA
2009 Cultural Resources Evaluation and Impacts Assessment, 4587 Mulberry Street, 4586 Olivewood Avenue, and 5206-5226 Olivewood Avenue, Riverside, CA
2009 Architects Biography Project, Survey LA, Los Angeles, CA
2009 Historic American Building Survey, 3608 Locust Street, Riverside, CA
2009 Cultural Resources Evaluation, 2750 Tyler Street
2009 Landmark Nomination, Bobby Bonds Residence, 2112 Vasquez Place, Riverside, CA
2009 Cultural Resources Evaluation, 4307 Park Avenue, Riverside, CA
2009 Cultural Resources Evaluation, 3524 Central Avenue, Riverside, CA
2010 Cultural Resources Services to the City of Norco, CA
2010 Cultural Resources Evaluation, 3615-3653 Main Street, Riverside, CA
2010 Cultural Resources Evaluation, 1791 Orange Street, Riverside, CA

2010 Cultural Resources Evaluation, La Quinta Resort Tennis Club, La Quinta, CA
2010 Landmark Nomination and Mills Act Application, 5175 Myrtle Avenue, Riverside, CA
2011 Cultural Resources Services to the City of Norco, CA
2011 Cultural Resources Evaluation, 3861 Third Street, Riverside, CA
2011 Cultural Resources Citywide Survey and Evaluation - Pre-1946, City of Norco, Norco, CA
2011 Analysis of ADA Alterations to Riverside Community College Historic Resources, Riverside Community College, Riverside, CA
2011 Cultural Resources Evaluation, 601 North Grand Avenue, Glendora, CA
2011 History of Charles M. Dammers in relation to 6893 Victoria Avenue, Riverside, CA
2011 Cultural Resources Citywide Context Statement - 1946-1966, City of Norco, Norco, CA
2012 Cultural Resources Services to the City of Norco, CA
2012 Cultural Resources Evaluation, 5578 Norwood Avenue, Riverside, CA
2012 Secretary of Interior Standards Analysis, Alterations to FMC Building, 3080 12th Street, Riverside, CA
2012 Historic Resources Impacts Analysis, Riverside Community Hospital, 4445 Magnolia Avenue, Riverside, CA
2012 Cultural Resources Evaluation, 5211 Golden Avenue, Riverside, CA
2013 Historical Collections Management Study and Plan, City of Norco, CA
2013 National Register of Historic Places Nomination, Mt Rubidoux, Riverside, CA
2013 Cultural Resources Evaluation, 3836 Second Street, Riverside, CA

REFERENCES:

Dan Coco, 4654 Sierra St, Riverside, CA 92504, (951) 784-6400
John Brown, BB&K, 3750 University, Riverside, CA 92501, (951) 826-8206
Kaitlyn Nguyen, City of Riverside, 3900 Main St, Riverside, CA 92522, (951) 826-2430
Patsy Herrera, 6336 Omega Dr, Riverside, CA 92506, (951) 532-6361
Father John Conrad, All Saints Episcopal Church, 3874 Terracina Drive, Riverside, CA (951) 906-3185
Andy Okoro, Norco City Manager, 2870 Clark Ave, Norco, CA (951) 270-5628
Erin Gettis, Associate AIA, Principal Planner and Historic Preservation Officer, City of Riverside, 3900 Main Street, Riverside, CA 92522 , (951) 826-5463
Janet Hansen, Deputy Manager Office of Historic Resources, City of Los Angeles, 200 N. Spring Street, Room 620, Los Angeles, CA 90012, (213) 978-1191

Gini Austerman, MA, RPA
1811 Palomino Avenue
Upland, California 91784
951-264-4287

ABOUT GINI AUSTERMAN, MA, RPA:

Ms. Austerman has more than ten years of experience in environmental consulting in all phases of cultural resources management, including archival research, Phase I, II, and III field investigations, Native American consultation, report preparation, mitigation monitoring, and artifact curation. Since 2002, she has managed more than 200 cultural resources projects as a consultant. She meets and exceeds the Secretary of the Interior's Professional Qualification Standards in prehistoric archaeology, is a Registered Professional Archaeologist (RPA), and has attended the Riverside County Cultural Sensitivity Training Course. Ms. Austerman has experience in preparing documentation in support of the projects that fall under the jurisdiction of Section 106 of National Historic Preservation Act (Section 106), National Environmental Policy Act (NEPA), and/or California (CEQA) Environmental Quality Act. She has served as a project manager, assistant project manager, field director, and researcher for private environmental planning firms, and government agencies (city, state and federal).
Ms. Austerman's technical experience includes archaeological fieldwork, laboratory analyses (including prehistoric lithic artifact, historic artifact, and marine shell analysis), and reporting. She has conducted records searches and archival research at locations including numerous California Historical Resources Information System (CHRIS) centers, local libraries, historical societies, museums, city building and planning departments.
Ms. Austerman's professional experience includes the preparation of various Cultural Resources Compliance Reports, and Archaeological Survey Reports within Riverside County. Projects within Riverside County include the Temescal Canyon Initial Study, the Temecula Education Center, and the Thomas Mountain Fuels Reduction Survey in Idyllwild. Many of these reports were reviewed and approved with minimal comments.

EDUCATION AND TRAINING:

M.A., Anthropology, emphasis in Archaeology, California State University, Fullerton, 2004
B.A., Anthropology, emphasis in Archaeology, minor in Art/Illustration, California State University, Fullerton, 2002
Riverside County Cultural Sensitivity Training 2011, 2009, 2007
Visual Resource Management Training, Casper, Wyoming 2011
Mine Hazard Safety Training, Salt Lake City, Utah, 2008
Section 106 Essentials Workshop, Advisory Council; St. Paul, Minnesota, 2007
CEQA Workshop, Society for California Archaeology; Ventura, California, 2006

PROFESSIONAL EXPERIENCE:

LSA Associates, Inc.; Riverside, California, February 2013–Present
POWER Engineers, Inc.; Anaheim, California, April 2010-February 2013
SWCA Environmental Consultants; Pasadena, California, July 2008–February 2010
LSA Associates, Inc.; Riverside, California, February 2006–July 2008
Statistical Research, Inc.; Redlands, California, August 2003–February 2006
U.S. Forest Service; Idyllwild, California, June 2005–August 2005
LSA Associates, Inc.; Irvine, California, November 2002–March 2003

PROFESSIONAL MEMBERSHIPS:

Register of Professional Archaeologists, Member
Society for American Archaeology, Member
Society for Historical Archaeology, Member
Society for California Archaeology, Member
California Preservation Foundation, Member

SIGNIFICANT HISTORIC RESOURCES RELATED WORK:

2013 Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Cultural Resources Impact Report, Riverside, California
2012 Blythe Mesa Solar Project, Blythe, Riverside County, California
2012 Pacificorp Lassen Substation Project, Lassen, California
2011 Riverside Transmission Reliability Project, Riverside County, California
2011 Pacificorp Happy Camp Transmission Project, Siskiyou County, California
2011 Pacificorp Lines 2 and 14 Transmission Line Project, Siskiyou County, California
2010 Comprehensive Inventory within Angeles National Forest, LADWP, Los Angeles County
2010 Scattergood Generating Station Repower Project, Los Angeles County, California
2010 Scattergood to Olympic Transmission Line, LADWP, Los Angeles County, California
2010 Imperial Irrigation District, 150 MW El Centro Unit 3 Repower, Imperial County, California
2009 Tonner Canyon Cultural Resources Assessment, Orange County, California
2009 San Gabriel Trench Phase II testing, Phase III Data Recovery, Los Angeles County, California
2009 Kramer Junction Environmental Impact Report, Cultural Resources Assessment, San Bernardino County, California
2008 Monument Fuel Break Project; Riverside County, California
2008 CAJA Avenue of the Stars; Los Angeles, California
2008 Bragg Shooflies Project; Imperial County
2008 Temescal Canyon Initial Study, Riverside County, California.
2008 Temecula Education Center; Riverside County, California
2007 Cushenbury 21 Mine Reclamation Project; San Bernardino County, California
2007 Apple Valley / Bear Valley Environmental Impact Assessment
2007 Adelanto Target Gateway Initial Study; Adelanto, California
2007 Temescal Canyon Initial Study; Riverside County, California
2007 McSweeny Farms, Riverside County, California
2007 Temecula Education Center; Riverside County, California
2007 J. Serra Catholic High School; Orange County, California
2006 Whelton-Mohawk Survey; Yuma, Arizona
2005 Thomas Mountain Fuels Reduction Survey, U.S. Forest Service; Riverside County, California
2005 Southern California Edison – Replacement Pole Survey; Tulare, San Bernardino, and Riverside Counties, California
2005 Dove Cemetery; San Luis Obispo County, California
2005 Joint Red Flag Project, Nellis Air Force Base; Lincoln County, Nevada
2005 Lakeview; Riverside County, California
2005 Barry M. Goldwater Range; Gila Bend, Arizona
2004 Playa Vista; Los Angeles County, California
2004 Prado Dam; San Bernardino County, California
2003 Pan Hot Springs; San Bernardino National Forest, California
2002 CA-ORA-269, Newport Coast; Orange County, California

REFERENCES:

Donn Grenda, Statistical Resources, Inc. Redlands, Ca., 909-335-1896
Ivan Strudwick, LSA Associates, Inc., Irvine, Ca., 949-337-16101

Appendix B: Archaeological Letter Report - Virginia Austerman, MA, RPA

Virginia Austerman, M.A., RPA
1811 Palomino Avenue
Upland, California 91784
June 18, 2013

Wilkman Historical Services
P.O. Box 362
Riverside, California 92502

RE: Archaeological Resources Survey Riverside Community Hospital Specific Plan

Dear Mr. Wilkman,

At your request, a cultural resources assessment has been completed on the Riverside Community Hospital (RCH) Specific Plan Project, located at 4445 Magnolia Avenue, Riverside, California. Riverside Community Hospital currently provides 372 beds and operates on a 17.5-acre property situated south of 14th Street, between Brockton and Magnolia Avenues. The Hospital currently operates under a Conditional Use Permit dating back to the 1960s and the Downtown Specific Plan, adopted in 2003. The purpose of the current project is to develop a new Specific Plan, specifically tailored to the hospital's needs for growth and expansion. Once adopted, the new Riverside Community Hospital Specific Plan will supersede both the Conditional Use Permit and the Downtown Specific Plan as they pertain to the hospital property.

The Hospital Specific Plan will address development and use needs spanning a 30-year period and will address both needs for expansion and the need to comply with Senate Bill 1953 requirements for seismic safety. Figures 1, 2, and 3 show the location of the Project at the regional, city, and neighborhood levels.

FIGURE 1: LOCATION IN THE REGION

SOURCE: UNITED STATES GEOLOGICAL SURVEY

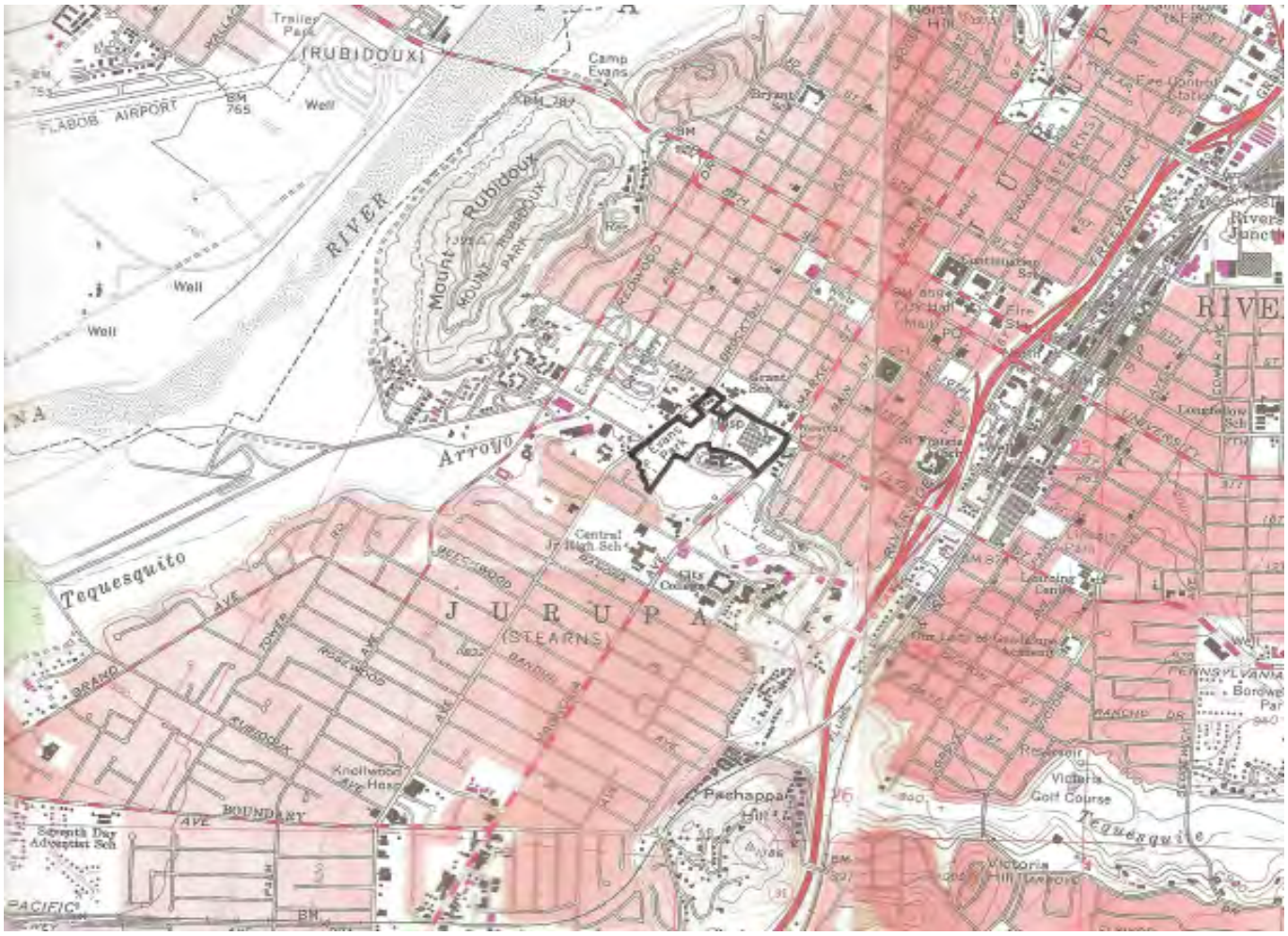


FIGURE 2: LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

The Project is located northeasterly of the intersection of Brockton and Tequesquite Avenues within an unsectioned portion of Township 2 South, Range 5 West, San Bernardino Baseline and Meridian, as depicted on the U.S. Geological Survey (USGS) *Riverside West* 7.5-minute topographic quadrangle (1967, photorevised 1980) (Figure 2).

The purpose of this report is to provide historic and prehistoric contextual information and recommendations for use by RCH and City of Riverside staff in regard to potential cultural resources impacts from the proposed specific plan. The cultural resources assessment was completed pursuant to the California Environmental Quality Act (CEQA), Public Resources Code (PCR) Chapter 2.6, Section 21083.2, and the California Code of Regulations, Title 14, Chapter 3, Article 5, Section 15064.5 and the City's Historical Landmarks Ordinance (Chapter 2.24 of the Municipal Code).

Environmental Setting

The study area is in Riverside County within the Santa Ana River watershed. The natural topography of the study area is valley lowland intersected by rolling hills and surrounded by mountain ranges. Elevations range from 680 to 1,900 feet above mean sea level (AMSL). Most of the study area has been developed or disturbed, and the only remaining large areas of native habitats occur along the Santa Ana River and in the Jurupa Mountains. Mt. Rubidoux is within one mile of the Project, on the east side of the Santa Ana River.

FIGURE 3: LOCATION IN THE NEIGHBORHOOD AND SPECIFIC PLAN BOUNDARIES

SOURCE: CITY OF RIVERSIDE GIS SYSTEM

Climate

The climate of the Santa Ana River valley is classified as Mediterranean, with hot, dry summers and cool, wet winters. Average annual precipitation ranges from 12 inches per year in the coastal plain to 40 inches per year in the San Bernardino Mountains to the north (Beck and Haas 1974).

Geology

The entire study area is within the north central Peninsular Ranges Geomorphic Province of California. This geomorphic province is characterized by a series of mountain ranges separated by northwest trending valleys, sub-parallel to branching faults from the San Andreas Fault (CGS California Geological Survey 2002). The Peninsular Ranges Province extends 900 miles from the Transverse Ranges to the north southward to the tip of Baja California (Norris and Webb 1990). The project area sits on older Pleistocene alluvim (Qof) that covers Cretaceous granitic rocks. The ground surface visibility was zero due to the paving of the parking lot area.

Hydrology

The Santa Ana River is less than one mile west of the Project. This river is the largest stream system in southern California, extending from its headwaters in the San Bernardino Mountains over 100 miles southwest to the Pacific. Spring Brook, less than one mile northwest of the Project, is located on the north side of Mt. Rubidoux. Winter and spring floods commonly result from storms during wet years. Before European American settlement, the Santa Ana River was a perennial stream flowing from the San Bernardino and San Gabriel mountains to the Pacific Ocean. Many springs, marshes, swamps, and bogs were interspersed throughout the watershed.

Biology

At an elevation of approximately 800 feet ASML, the Project falls into the Lower Sonoran Life Zone (Bean 1977), which ranges from below sea level to an elevation of approximately 3,500 feet AMSL and is representative of the Mojave and Colorado Deserts. Plants common to the area include cacti, desert agave, cheesebush, catclaw, acacia, and seasonal grasses. Animals commonly found in the area include deer, coyote, foxes, rabbits, rodents, ravens, raptors, reptiles and insects. The Project is currently covered in asphalt and includes ornamental landscaping.

CULTURAL CONTEXT

Prehistory

Of the many chronological sequences proposed for southern California, the archaeological literature typically uses two primary regional syntheses. In 1955, Wallace advanced a chronology that defined four cultural horizons, each with characteristics reflecting local variations: Early Man, Milling Stone, Intermediate, and Late Prehistoric horizons. In 1986, Warren offered a chronology based on a more ecological approach which defined five periods in southern California prehistory: Lake Mojave, Pinto, Gypsum, Saratoga Springs and Protohistoric. Warren viewed cultural continuity and change in terms of various significant environmental shifts, defining the cultural ecological approach for archaeological research of the California deserts and coasts. Many changes in settlement patterns and subsistence focus are viewed as cultural adaptations to a changing environment, beginning with the gradual environmental warming in the late Pleistocene, the desiccation of the desert lakes during the early Holocene, the short return to the pluvial conditions during the middle Holocene, and the general warming and drying trend that currently continues (Warren 1986).

Ethnography

The Project is situated within the traditional boundary region of two Native American groups: the Gabrielino and the Cahuilla (Kroeber 1908; Bean and Smith 1978; Bean 1978). These groups, similar to other Native American groups in southern California, were semi-nomadic hunter-gatherers who subsided on seasonal plant and animal resources. The first written accounts of the Gabrielino and Cahuilla are attributed to Spanish Mission fathers who described their encounters in the late 18th century. Numerous ethnographers documented these tribes, including Barrows (1900), Bean (1972), Blackburn (1962-1963), Hooper (1920) and Strong (1929), as well as many others.

Gabrielino: Many of the native cultural groups were named for the Spanish period missions in the area. An example is the term 'Gabrielino' which is given to the tribes inhabiting the region around the Mission San Gabriel. The Gabrielino were hunters and gatherers who utilized food resources along the coast as well as inland areas of Los Angeles, Orange, San Bernardino and Riverside Counties during ethnographic times (Kroeber 1925; Heizer 1968).

The lifestyle of the Gabrielino was considered semi-sedentary, living in permanent communities near inland watercourses and coastal estuaries. They caught and collected seasonally available food. Groups moved to temporary camps to collect plant resources like acorns, buckwheat, berries, and fruit as well as conducting communal rabbit and deer hunts. Seasonal camps were also established along the coast and near estuaries where they would gather shellfish and hunt waterfowl (Hudson 1971).

Social organization for the Gabrielinos was focused on families living in small communities. Patrilineally organized, extended families would occupy villages, both clans and villages would marry outside of the clan or village (Heizer 1968). The villages were administered by a chief whose position was patrilineal, passed from the father to the son. Spiritual and medical activities were guided by a shaman; group hunting and fishing were supervised by individually appointed male leaders (Bean and Smith 1978).

Cahuilla: The other Native American group inhabiting the Santa Ana River area was the Cahuilla. Their traditional territory encompassed diverse topography ranging from the Salton Sink to the San Bernardino Mountains and San Gorgonio Pass (Bean 1978; Kroeber 1925). The Cahuilla were generally divided into three groups: Desert Cahuilla, Mountain Cahuilla and Pass Cahuilla (Kroeber 1925). Like other southern California Native American groups, the Cahuilla were semi-nomadic peoples leaving their villages and using temporary camps near available plant and animal resources.

Cahuilla villages usually were in canyons or near adequate sources of water and food plants. The immediate village territory was owned in common by a lineage group or band. The other lands were divided into tracts owned by clans, families, or individuals. Trails used for hunting, trading, and social interaction connected the villages. Each village was near numerous sacred sites that included rock art panels (Bean and Shipek 1978).

Social organization of the Cahuilla was patrilineal clans and kinships groups known as moieties. Lineages within a clan cooperated in defense, subsistence activities and religious ceremonies. Most lineages owned their village site and resource plots; although the majority of their territory was open to all Cahuilla people (Bean 1978).

Spring Rancheria was one of the Cahuilla villages near the Project, located on the north side of Mt. Rubidoux at the point where Spring Brook joined with the Santa Ana River. This village was occupied from approximately 1880-1900. The village was listed in the 1889 *Riverside City Directory* which documented that residents were used for labor in the Riverside Colony (Gunther 1988). Tom Patterson, in his book *A Colony for California* (1971:138) cites early Riverside resident, Jesse Burnham as stating "… there were three big Indian rancherias within a mile of town; one in Fairmount Park, one at the brook behind Little Rubidoux (Spring Rancheria), and one at the foot of Rubidoux Mountain".

Numerous prehistoric archaeological sites are known to be within one mile of the Project, which is within the traditional boundary region of two Native American groups, the Gabrielino and the Cahuilla. The Spring Rancheria (CA-RIV-678) was reported to be occupied in the late 1800s. European settlement and development began in this area during the late 1870s, which indicates a shared use of the area. In addition, Native Americans typically settled near water sources such as the Santa Ana River and Spring Brook. The Tequesquite Arroyo, in which the subject Project is proposed to be located, may have contained the water, plant, and animal resources needed to sustain life. Consequently, there is a possibility it may have been used by area Native American groups.

HISTORIC CONTEXT

In California, the historic era is generally divided into three periods: the Spanish or Mission Period (1769 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present). Early exploration of the Riverside County area began slowly until Lieutenant Pedro Fages, then military governor of San Diego, crossed through the San Jacinto Valley in 1772.

Spanish/Mission Period. The Juan Bautista de Anza expedition crossed the Colorado River and entered California on January 8, 1774. This was Bautista de Anza's second excursion into Riverside County. And the party included 29 soldiers and their families. This group of Spaniards would form the new community at the Presidio of San Francisco (Beattie 1925).

Mexican/Rancho Period. Mexico overthrew Spanish rule in 1821 and the missions began to decline. By 1833, the Mexican government passed the Secularization Act and the missions reorganized as parish churches. This resulted in the loss of the vast mission land holdings and the release of their neophytes (Beattie and Beattie 1951)

Rancho Jurupa. The rancho at Jurupa was established in 1820 along the Santa Ana River. This was a principal cattle grazing operation for the San Gabriel Mission, located about 30 miles east. Spring Rancheria and Rancho Jurupa inhabitants provided the labor for the Mission as well as for the European immigrants who began arriving from the East Coast during the 1870s. These immigrants settled in the Riverside area and established the Colony of Riverside.

American Period. With the signing of the Treaty of Guadalupe Hidalgo, the American Period began. In 1850, the state of California was admitted into the Union of the United States primarily due to the population increase caused by the Gold Rush of 1849. The cattle industry was at the height of its greatest prosperity during this period. During the Mexican Period large tracts of land were granted to Californios; many of these tracts of land developed into huge pastoral estates in California. The demand for beef by the Gold Rush miners resulted in a cattle boom that lasted from 1849 to 1855. However, sheep imports from New Mexico and cattle from the Mississippi and Missouri Valleys caused a surplus in demand for local beef. As the beef industry collapsed, many California ranchers lost their ranchos through foreclosure. In 1861 and 1862, a series of disastrous floods accelerated the decline. Two years of serious drought, followed by reduced rainfall for additional ten years, altered cattle ranching in southern California for good (Beattie and Beattie 1951; Cleland 1941).

In 1870, the Southern California Colony Association purchased portions of the Jurupa and Rubidoux Rancho along the Santa Ana River. This was the start of the Colony of Riverside (Stonehouse 1965; Patterson 1971). With the completion of the Southern Pacific Railroad line from Los Angeles through the San Gorgonio Pass in 1876, a period of land development and agriculture began. Riverside County was established on May 9, 1893, drawing land from portions of San Bernardino and San Diego Counties. A land boom in the 1870s and 1880s in addition to the development of the local citrus industry spurred growth in Riverside. Millions of citrus, primarily naval orange trees, created what was known as the 'Citrus Belt' which ran from Redlands to Pasadena. The development of an irrigation and water distribution system within the region was integral to the success of the local citrus industry.

METHODS

Records Search

A records search was conducted by the Eastern Information Center (EIC) on November 6, 2012. The EIC is located at the University of California, Riverside and is a branch of the California Historical Resources Information System (CHRIS). The records search included a review of all recorded historic and prehistoric archaeological resources and of known cultural resource studies within a one-mile radius of the Project. In addition, the EIC staff consulted the California State Historical Property Data File (HPD), which includes the National Register of Historic Places (NRHP) California Register of Historical Resources (California Register), California Historic Landmarks (CHL), California Points of Historic Interest and other local historic registers. The Historic Properties Directory (2010) was also inspected for addresses within the Project.

Field Survey

The pedestrian survey of the Project was conducted by archaeologist Gini Austerman on May 3, 2013. The survey was conducted by walking parallel transects where possible, spaced approximately 20 meters. (Areas of undeveloped land were closely examined)

Native American Participation

A letter was submitted to the Native American Heritage Commission on November 12, 2012 requesting a records search of the Sacred Lands File. A description and map of the Project were included. To date, no response from the NAHC has been received.

RESULTS

Records Search

Data from the EIC indicates that 42 cultural resource studies have been conducted within the one-mile radius of the Project, none of which are within the current Riverside Community Hospital property. The list of studies can be found as an attachment with this letter. Outside of the Project boundaries but within the one-mile radius, 12 archaeological sites have been recorded. One of these, CA-RIV-3248 (Chinatown) is within 100 feet (30 meters) west of the Project. A second resource is within 100 feet (30 meters) northeast of the Project; this is CA-RIV-5831H, also known as the Old Magnolia Avenue Trolley and Refuse Dump and the site of the current Newman Park. The archaeological sites within the one-mile search radius are listed in Table 1, below. In addition to the archaeological resources, the records search identified 190 historic buildings and structures within the one-mile radius, none of which are within the Project.

Table 1. Archaeological Resources Within One-Mile of the Project

PRIMARY NUMBER	TRINOMIAL	DESCRIPTION
33-000678	CA-RIV-678	Spring Rancheria
33-003248	CA-RIV-3248	Chinatown
33-003358	CA-RIV-3358	Refuse Deposit
33-004170	CA-RIV-4170	Refuse deposit
33-004172	CA-RIV-4172H	Bedrock milling feature
33-004495	CA-RIV-4495	Mary Evan's Booster Station
33-004791	CA-RIV-4791	Upper Riverside canal
33-007838	CA-RIV-5831H	Lower Riverside canal
33-11006	CA-RIV-6646H	Old Magnolia Avenue trolley line and refuse deposit
33-13917	CA-RIV-7616	Historic refuse deposit
33-13941	CA-RIV-7631	John W. North Park
33-19936	CA-RIV-10126	Historic refuse deposit

Chinatown CA-RIV-3248. The approximately 2.5 acre site of Riverside's Chinatown is the eastern portion of the original 6.3-acre site where a village of Chinese immigrant lived from 1885 until the 1930s. Beginning in 1943, and until his death in 1974, Mr. George Wong (Wong Ho Luen) owned the site and lived there alone. Chinese immigrants performed important tasks that helped the establishment Riverside. These included work on railroads and laboring in Riverside's major economic engine, the citrus industry. Chinese immigrants also performed many other services in the City or Riverside.

This site was originally recorded in 1968 as a California Point of Historical Interest, Number RIV-008; at the time of this recording the plot was listed as a 7-acre settlement founded in 1886 by Duey Wo Lung, a pioneer Chinese. The site was recorded in 1980 as a result of a survey conducted by Dr. Nancy Wey with the Chinese American Survey of San Jose, California. Dr. Wey recorded the site as The Site of Historic Chinese American Community, or 'Chinatown'. She described the site as torn down in 1977 to make way for a parking lot. The last standing buildings were referred to as one single building but were, in fact, a series of six adjacent buildings that shared common walls to save space and expense. After Mr. Wong's death in 1974, the site changed hands several times and in 1979 was acquired by the Riverside County Office of the Superintendent of Schools. Plans by the County Schools Office to lease the site for a parking lot in 1984 led to a grassroots citizen's movement to halt construction of the parking lot until an archaeological study of the site could be conducted.

In 1985, a non-profit research organization, the Great Basin Foundation, conducted an exploratory excavation of a small section of the site. This excavation established that brick foundations still exist below ground. A large portion of the original 7-acre plot was by then occupied by a maintenance and operations office for the County of Riverside. The test excavation confirmed the Chinatown proper as now being defined as 2.5-acres. During the 1940s and 1950s the majority of the site was covered in asphalt.

The Chinatown site was nominated for inclusion to the National Register of Historical Places in 1990. The site had been looted by pot-hunters over the years prior to the nomination; some of the artifacts had been returned to and are curated at the Archaeological Research Unit at URC.

The Old Magnolia Avenue Trolley Line and Refuse Dump CA-RIV-5831. This site is within 100 feet of the RCH property and consists of the old Magnolia Avenue trolley line and a turn-of-the-century, and later, refuse deposit and land fill. The site was recorded in 1996 by CRM Tech, which conducted a test excavation trench in the site. The test trench revealed that historic refuse was at least 15 feet deep and is now buried below modern-day curbs, gutters, streets and sidewalks. The Newman Park has been built over a portion of the site. The majority of the refuse consisted of bricks, bottle glass, ceramic, and iron artifacts. The true extent of the site, both vertically and horizontally, was not determined by the testing program.

The site is located on land that was created in 1913 when a segment of the Tequesquite Arroyo was filled with dirt to accommodate road construction. The fill dirt was 14 feet deep; therefore artifacts recovered below this depth represented domestic refuse deposits that predated the 1913 construction project. The historic dates of the artifacts identified dated as early as 1895. The test program and artifact analysis conducted by CRM Tech in 1996 suggests that, given the location of the site on the edge of the original one-mile square of the City of Riverside, the refuse deposit could likely have been the location of an early town dump. CRM Tech concluded that the site held very high research potential for interpreting turn-of-the-century economics and lifestyle of Riverside (Love and Tang 1995).

Field Survey

The RHC complex covers an area of approximately 17.5 acres, all of which has been previously disturbed by multiple construction episodes over a span of 90 years. The majority of the project is developed with medical buildings and asphalt parking lots and driveways. One small section located just south of the Buildings I and J parking structures, measuring

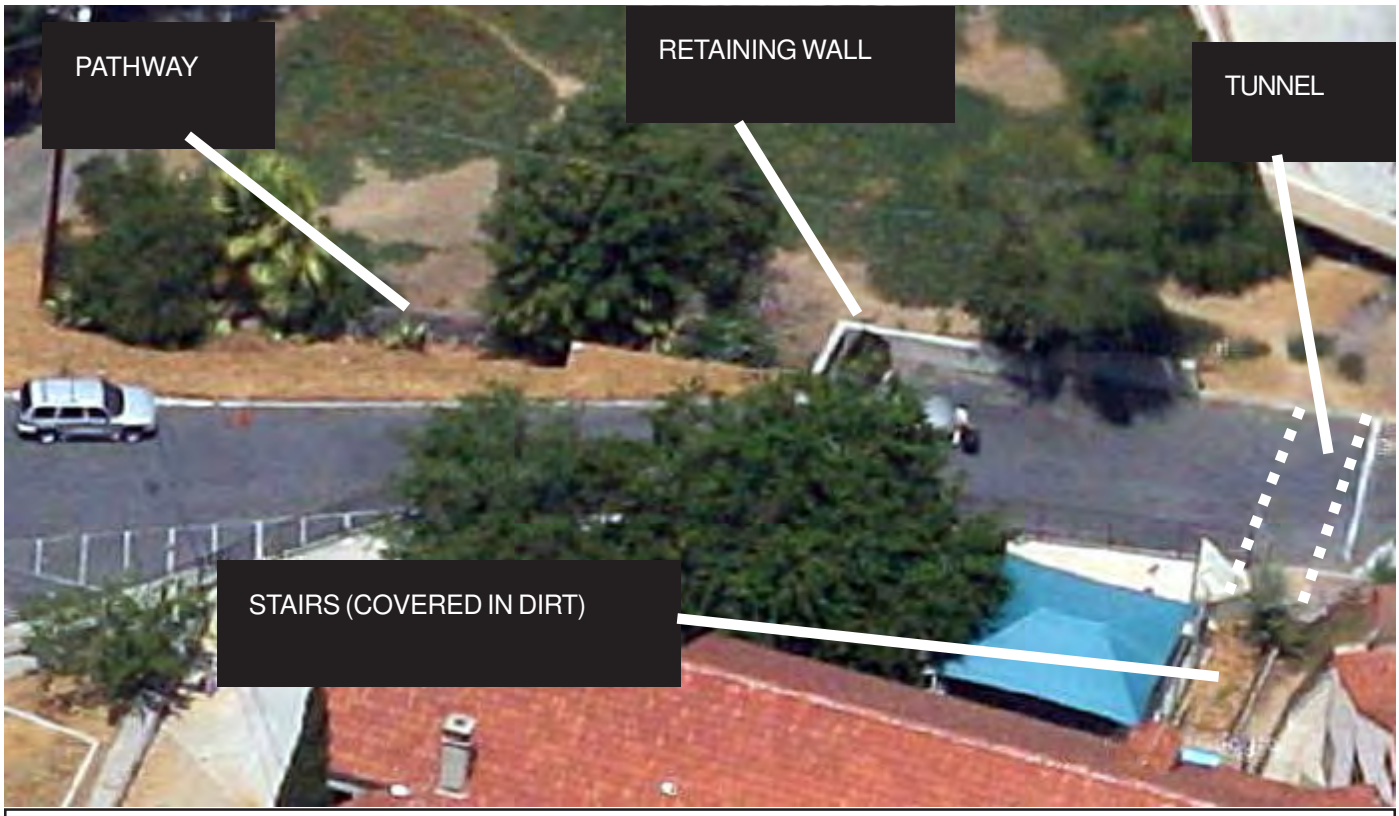


FIGURE 4: STAIRS, TUNNEL, PATHWAY FEATURE

SOURCE: WILKMAN HISTORICAL SERVICES

approximately 500 x 360 x 400 feet of a roughly triangular-shaped area within the project property remains exposed and undeveloped. This area is a small north-westerly facing remnant of the Tequesquite Arroyo, located below the Calvary Presbyterian Church. Within this area is an asphalt driveway which ascends the hill to the Church. To the east of the driveway are some improvements (Figure 4) that once linked the church to the Evans Athletic Park and additional parking. The improvements consist of a set of stairs on the church property that lead to a concrete pipe that serves as a tunnel under a perimeter drive along the top of the bluff over the arroyo. The improvements also include a poured-in-place concrete retaining wall on the north side of the perimeter driveway, below which is a pathway defined by concrete and concrete block retaining walls. Chain link fencing also helps define the walkway. The stairs and most of the tunnel were backfilled with dirt in 2002 and the tunnel is blocked on both sides by chain link fencing. According to previous pastor of Calvary Presbyterian Church, Dean Kokjer, the improvements were built c. 1936. The stairs and tunnel were made inaccessible by fill dirt in 2002 to reduce malicious mischief related to the remote improvements. While this resource is partially covered in dirt, WHS decided to address it as a historic resource in the comprehensive cultural resources survey and evaluation of the RCH Specific Plan to which this letter report will become an attachment.

Discussion

The records search did not identify any archaeological resources within the Project; however, two cultural resources are within 100 feet of the Project. These are CA-RIV-3248 and CA-RIV-5831, discussed above. The field survey also identified the stairs, tunnel, and pathway all apparently located on church property.

In regard to CA-RIV-5831, the RCH Specific Plan includes plans for a new building and parking improvements in the northeast portion of the site that would necessitate the demolition of Building A, located at the southwest corner of Magnolia Avenue and Fourteenth Street, within 100 feet of site CA-RIV-5831. This site was documented and a testing program determined that the extent of the subsurface historic refuse deposit could not be determined at the time (Love and Tang 1995). Turn of the nineteenth century Assessor maps of the area show a southerly jog in Fourteenth Street just west of Magnolia Avenue. This jog likely skirted around a portion of an arroyo that extended into the Fourteenth Street right-of-way. A parking lot north of Building A now occupies the area of this former Fourteenth Street jog. The potential for undiscovered subsurface cultural resources related to CA-RIV-5831 is very high in this area and may extend into the RCH property.

Site CA-RIV-3248, Chinatown, is outside of the RCH property but within close proximity(less than 100 feet) and retains a high probability of subsurface archaeological deposits that could extend beyond the previously recorded site boundary. A previous cultural resources report identified the potential for archaeological deposits in the area northeast of Tequesquite and Brockton Avenues where a new building and parking structure are now under construction. (WHS 2013) Recommendations in that report resulted in an archaeological monitoring program that is now under way in relation to the construction.

In regard to the church stairway-tunnel improvements, the church property is within the scope of the Hospital Specific Plan cultural resources work, and DPR forms recording this feature have been completed and submitted for insertion into the overall cultural resources report. This feature is a fairly recent improvement and is not likely to yield, information important to the prehistory or history of the State or the Nation. It is, therefore, not a historic resource for purposes of CEQA.

Recommendations

The purpose of this study is to identify cultural resources within and adjacent to the Project, and to assist the City of Riverside in determining whether any such resources meet the official definition of "historical resources' as defined by CEQA. Under CEQA, a project is considered to have a significant effect on the environment if it causes a substantial adverse change in the significance of a historical resource or unique archaeological resource. Substantial adverse change means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired or diminished. Furthermore, it is recommended by CEQA that cultural resources be preserved in-situ whenever possible through avoidance of the resource. Whenever a historical resource or unique archaeological resource (Public Resources Code [PRC] 21083.2) cannot be avoided by project activities, effects shall be addressed and mitigated as outlined in PRC 15126.4 and 15331 of CEQA.

Historical Resources

According to CEQA, lead agencies are required to identify historical resources that may be affected by any undertaking involving state or county lands, funds, or permitting. Also, the significance of such resources that may be affected by the undertaking must be evaluated using the criteria for listing in the California Register of Historical Resources (CRHR) (PRC §5024.1, Title 14 CCR, Section 4852). Generally, a resource is considered by the lead agency to be historically significant if the resource has integrity and meets the criteria for listing in the CRHR. Resources already listed or determined eligible for the National Register of Historic Places (NRHP) and California Historic Landmarks (CHL) are by definition eligible for the CRHR. Historical resources included in resource inventories prepared according to California State Office of Historic Preservation (OHP) guidelines or designated under county or city historic landmark ordinances may be eligible if the designation occurred during the previous five years.

For a resource to be eligible for the CRHR, it must satisfy each of the following three standards:

- A property must be significant at the local, state or national level, under one or more of the following criteria:
    1. It is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States.
    2. It is associated with the lives of persons important to the nation or California's past.
    3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
    4. It has yielded, or may be likely to yield, information important to the prehistory or history of the State or the Nation;
- A resource must retain enough of its historic character or appearance to be recognizable as a historic property, and to convey the reasons for its significance; and
- It must be fifty years old or older (except for rare cases of structures of exceptional significance).

Integrity is defined as the authenticity of a historical resource's physical identity, evidenced by the survival of characteristics that existed during the resource's period of significance. CRHR regulations specify that integrity is a quality that applies to historical resources in seven ways: location, design, setting, materials, workmanship, feeling, and association.

A cultural resources records search and field survey was completed for the Project in an effort to locate archaeological resources. This study determined that no known archaeological 'historical resources', as defined by CEQA, are present within the Project; however, two previously documented archaeological resources are near or adjacent to the Project. These are Chinatown (CA-RIV-3248) and the Old Magnolia Trolley Line and Refuse Dump (CA-RIV-5831H), now the site of Newman Park. These two archaeological sites are very significant to the early history of Riverside and both retain subsurface deposits of unknown extent. Planned and potential future development is expected in areas closely situated between these two cultural resources. The field survey also located a new potential archaeological resource on the Calvary Presbyterian Church property (stairs, tunnel, pathway), however, this feature was determined to not be a historical resource as defined by CEQA.

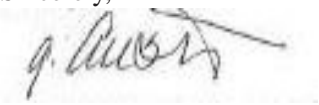
Due to the proximity of the two archaeological sites and the unknown extent of their subsurface deposits, I recommend that all demolition of structures and ground disturbing activities be monitored by a qualified archaeologist meeting the requirements of the Secretary of the Interior (SOI). If any archaeological resources are identified during the ground disturbing activity, work should be halted and redirected until a qualified archaeologist meeting the SOI standards can assess the significance of the finding.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of the origin and disposition pursuant to PCR Section 5097.98.

The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her representative, the descendent may inspect the site of the discovery. The descendent shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Thank you for this opportunity to be of assistance with this project. If you need further information, please do not hesitate to contact me.

Sincerely,



Virginia (Gini) Austerman, M.A., RPA

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Gini Austerman
1811 Palomino Avenue
Upland, California 91784

Mr. Dave Singleton
Associate Governmental Program Analyst
Native American Heritage Commission
915 Capital Mall, Room 364
Sacramento, CA 95814

November 5, 2012

Subject: Sacred Lands File Check for Proposed Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Project in Riverside County, California

Dear Mr. Singleton:

On behalf of Wilkman Historical Services, (WHS), I am requesting a Sacred Lands File Check for the Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Project, which has been proposed for construction in the City of Riverside. I have been contracted by WHS to conduct the archaeological assessment.

Perkins + Will Architects plan to construct a new three-story medical building and a five-story parking structure on the Riverside Community Hospital campus located at 4500 Brockton Avenue, APN 217-300-014, northeasterly of the intersection of Brockton and Tequesquite Avenues. Both buildings are proposed to displace existing paved and landscaped parking areas.

The Project depicted on the *Riverside West* 7.5' U.S. Geological Survey (USGS) Topographic Quadrangles (see attached Figure 1) in an unsectioned area of Township 2S, Range 5W of the San Bernardino Base Meridian.

I look forward to hearing from you. If you have any questions or desire additional information, please do not hesitate to contact me at (951)264-4287 or austermang@msn.com.

Sincerely,

Gini Austerman, M.A., RPA
Archaeologist

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

November 19, 2012

Ms. Gini Austerman, M.A., RPA
Consulting Archaeologist
1811 Palomino Avenue
Upland, CA 91784

Sent by U.S. Mail
No. of Pages: 5

Re: Sacred Lands File Search and Native American Contacts list for the proposed
Sacred Lands File Search and Native American Contacts list for the proposed
"Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Project;" located in the City of Riverside; Riverside County, California

Dear. Ms. Austerman:
:

The Native American Heritage Commission (NAHC) conducted a search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American traditional cultural places or cultural landscapes in any APE. While in this case, a search of the NAHC *Sacred Lands File* did not indicate the presence of any sites within the APE you provided. Also, a Native American tribe or individual may be the only source for the presence o traditional cultural places. For that reason, enclosed is a list of Native American individuals/organizations who may have knowledge of traditional cultural places in your project area. This list should provide a starting place in locating any areas of potential adverse impact. Also, there are Native American Cultural resources in nearby USGS Sections to the APE.

California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to. California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment

as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and California Public Resources Code Section 21083.2 (Archaeological Resources) that requires documentation, data recovery of cultural resources, construction to avoid sites and the possible use of covenant easements to protect sites.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list that the NAHC has provided in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider avoidance as defined in §15370 of the CEQA Guidelines when significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 21083.2 which requires documentation, data recovery of cultural resources.

The NAHC makes no recommendation or preference of any single individual, or group over another. All of those on the list should be contacted, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 4(f), Section 110 and (k) of the federal NHPA (16 U.S.C. 470 *et seq*), Section 4(f) of the Department of Transportation Act of 1966 (23 CFR 774); 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural

environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The NAHC remains concerned about the limitations and methods employed for NHPA Section 106 Consultation.

Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton

Attachment: Native American Contact List

Native American Contacts
Riverside County
November 19, 2012

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resources Manager
P.O. Box 1477 Luiseno
Temecula , CA 92593
(951) 770-8100
pmacarro@pechanga-nsn.gov
(951) 506-9491 Fax

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

San Manuel Band of Mission Indians
Carla Rodriguez, Chairwoman
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

Santa Rosa Band of Mission Indians
John Marcus, Chairman
P.O. Box 391820 Cahuilla
Anza , CA 92539
(951) 659-2700
(951) 659-2228 Fax

Gabrielino Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net
(909) 262-9351 - cell

Morongo Band of Mission Indians
Michael Contreras, Cultural Heritage Prog.
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
(951) 201-1866 - cell
mcontreras@morongo-nsn.gov
(951) 922-0105 Fax

San Manuel Band of Mission Indians
Ann Brierty, Policy/Cultural Resources Departmen
26569 Community Center. Drive Serrano
Highland , CA 92346
(909) 864-8933, Ext 3250
abrierty@sanmanuel-nsn.gov
(909) 862-5152 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Project; located in the City of Riverside; Riverside County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
Riverside County
November 19, 2012

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
P.O. Box 1477 Luiseno
Temecula , CA 92593
(951) 770-6100
hlaibach@pechanga-nsn.gov
(951) 695-1778 FAX

Serrano Nation of Mission Indians
Goldie Walker, Chairwoman
P.O. Box 343 Serrano
Patton , CA 92369

(909) 528-9027 or
(909) 528-9032

Cahuilla Band of Indians
Uther Salgado, Chairperson
PO Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
915-763-5549

Pechanga Cultural Resources Department
Anna Hoover, Cultural Analyst
P.O. Box 2183 Luiseño
Temecula , CA 92593
ahoover@pechanga-nsn.gov
951-770-8104
(951) 694-0446 - FAX

Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road Serrano
Banning , CA 92220 Cahuilla
siva@dishmail.net
(951) 849-4676

SOBOBA BAND OF LUISENO INDIANS
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Luiseno
San Jacinto , CA 92581
jontiveros@soboba-nsn.gov
(951) 663-5279
(951) 654-5544, ext 4137

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Project; located in the City of

Gini Austerman, M.A., RPA
Consulting Archaeologist
1811 Palomino Avenue
Upland, Ca. 91784

Mr. Joseph Hamilton, Chairman
Ramona Band of Cahuilla Mission Indians
P.O. Box 391670
Anza, California 92539
May 5, 2013

Subject: Proposed Riverside Community Hospital Specific Plan in Riverside County, California

Dear Mr. Hamilton:

I am sending you this letter on behalf of Wilkman Historical Services to inform you of the proposed Riverside Community Hospital Specific Plan and Development Project in the City of Riverside, California. At the request of Riverside Community Hospital (RCH), Wilkman Historical Services (WHS), with the assistance of Gini Austerman, MA, RPA, will perform cultural resource assessments to identify historical and archaeological resources within the project site and evaluate potential impacts to those resources.

Last December, 2012 a similar request was sent to you regarding the proposed Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Project on the southwesterly portion of the hospital property, which is currently underway. The proposed Specific Plan will assist RCH in guiding future expansion projects over a 30-year period within the entire 17-acre hospital campus. The RCH campus is located near downtown Riverside at 4445 Magnolia Avenue. It is bordered on the east by Magnolia Avenue, on the north by 14th Street, on the west by Brockton Avenue, and on the south by an irregular line corresponding with the north property lines of Calvary Presbyterian Church and residences to the west of Calvary Presbyterian Church.

We request information you are willing to share regarding Native American cultural resources in the project area as well as any comments or concerns you may have about the project in general. The information you provide will be considered in formulating and implementing the Specific Plan.

The project is located in an unsectioned portion of Township 5S Range 2W, which is depicted on the *Riverside West* 7.5' U.S. Geological Survey (USGS) Topographic Quadrangles of the San Bernardino Base and Meridian (see attached Project Area Map).

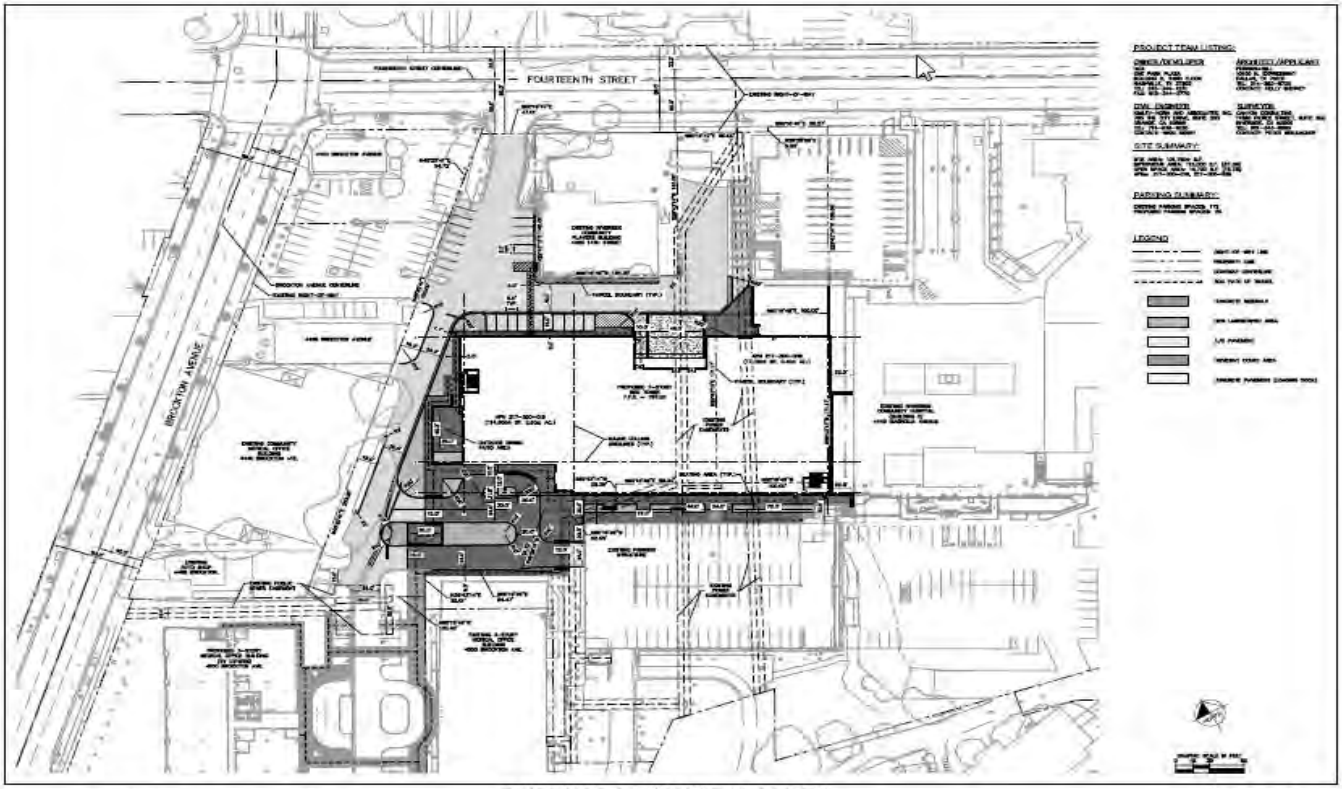
We look forward to hearing from you, Mr. Hamilton. If you have any questions or desire additional information, please do not hesitate to contact me at (951) 264-4287 (austermang@msn.com).

Sincerely,

Gini Austerman, M.A., RPA
Archaeologist

Enclosure: Project Aerial and Area Map (2)

Appendix C: Riverside Community Hospital - New Bed Tower Building Plans



HCA RIVERSIDE Community Hospital

RIVERSIDE COMMUNITY HOSPITAL
BED TOWER PLOT PLAN
RIVERSIDE, CALIFORNIA

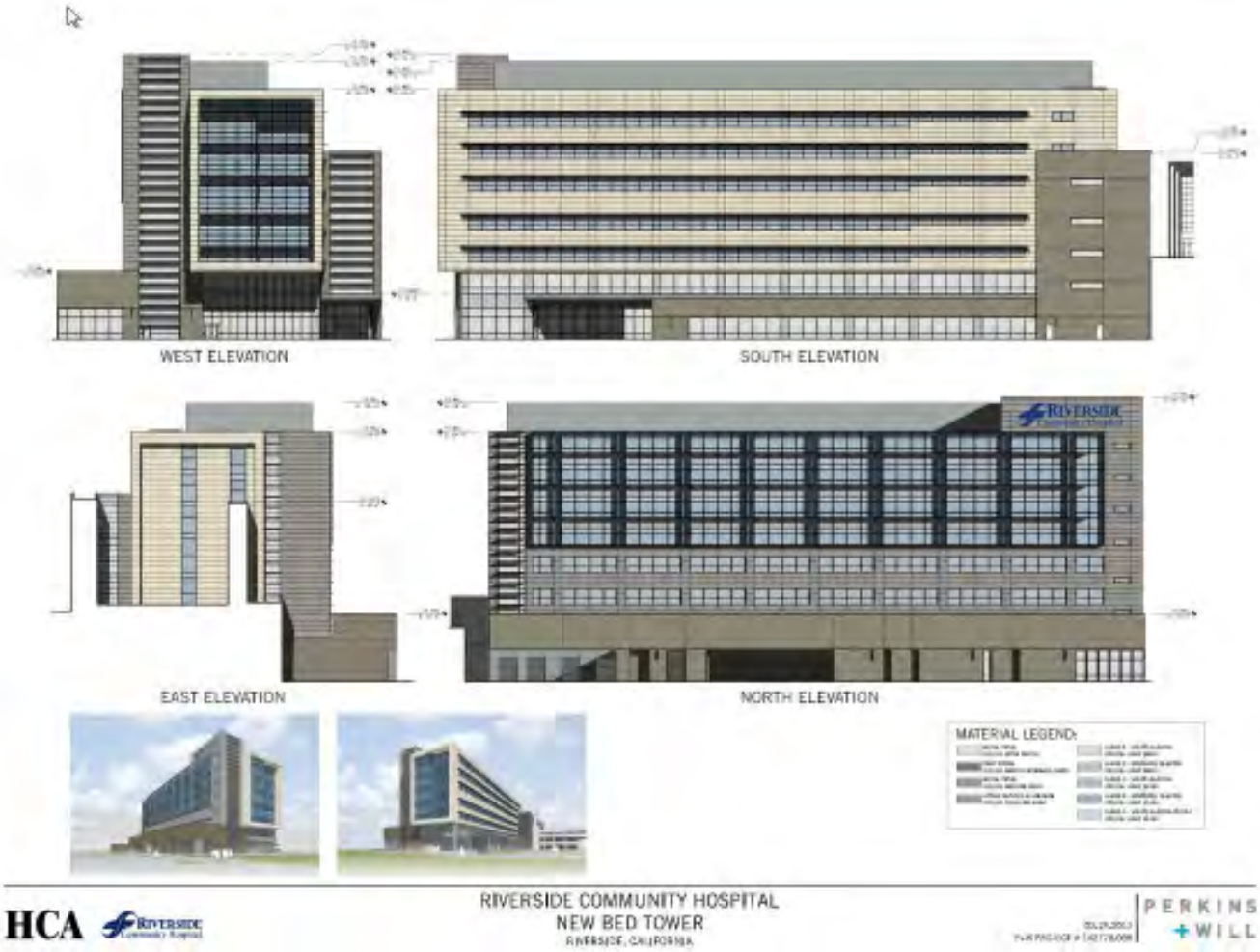
03.21.2013
P+W PROJECT # 142793.000

PERKINS + WILL

HCA

RIVERSIDE COMMUNITY HOSPITAL
NEW BED TOWER
RIVERSIDE, CALIFORNIA

PERKINS + WILL


WEST ELEVATION
SOUTH ELEVATION
EAST ELEVATION
NORTH ELEVATION
MATERIAL LEGEND:
HCA
RIVERSIDE COMMUNITY HOSPITAL
NEW BED TOWER
RIVERSIDE, CALIFORNIA
PERKINS
+ WILL

COMMUNITY PLAYERS THEATER
EXISTING PARKING GARAGE
MECHANICAL YARD
PROPOSED BED TOWER
EXISTING COMMUNITY MEDICAL OFFICE BUILDING 4440 BROCKTON AVE
EXISTING PARKING GARAGE
HCA
RIVERSIDE Community Hospital
RIVERSIDE COMMUNITY HOSPITAL
BED TOWER
RIVERSIDE, CALIFORNIA
PERKINS +WILL

Appendix D: **Primary Record & Building, Structure, Object Record**
Riverside Community Hospital - Building A - 4445 Magnolia Avenue

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

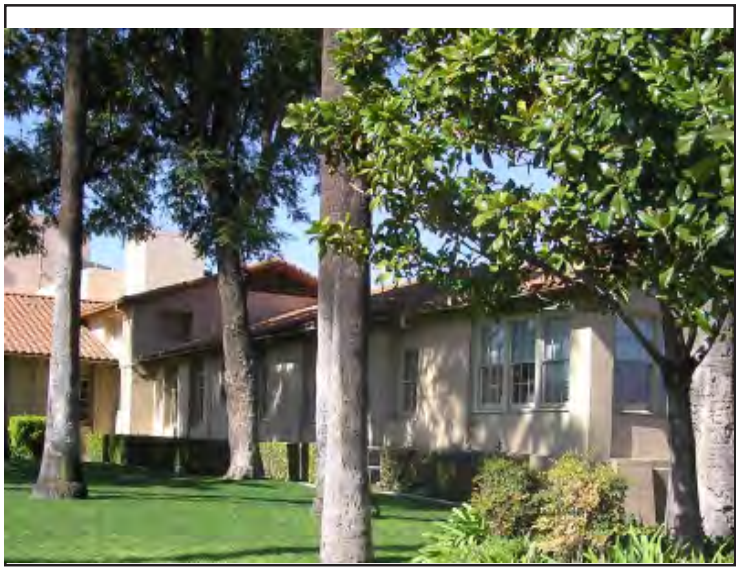
Trinomal_____
CHR Status Code 6L

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 18 ***Resource Name or #** (Assigned by recorder.) Building A - Riverside Community Hospital
P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4445 Magnolia Avenue, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 463330 **mN** 3756340
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-070-027
Southwest corner of Magnolia Avenue and Fourteenth Street
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)
***P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.) ***P5b. Description of Photo:** (View, date, Accession #) East elevation, February 2013



***P6. Date Constructed/Age & Sources:**
1923, Riverside City Building Permit

☒ Historic ☐ Preshistoric ☐ Both
***P7. Owner and Address:**
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒ **Continuation Sheet** ☒ **Building, Structure, Object Record** ☐ **Archaeological Record** ☐ **District Record** ☐ **Linear Feature Record** ☐ **Milling Station Record** ☐ **Rock Art Record** ☐ **Artifact Record** ☐ **Photograph Record** ☐ **Other (List):**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomal _____

LOCATION MAP

Page 2 **of** 18 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building A

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980

LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

KEY TO ELEVATION DESCRIPTIONS

The building in question, referred to as Building A by the hospital, is a single story poured in place, reinforced concrete structure with basement. The basement area that faces Magnolia Avenue is obscured by a mounded landscaped area and is not readily visible. The portion of the basement oriented toward 14th Street is partially above grade. The gabled roof has a cross gable toward the easterly end of the building and a gable at its former entry. The roof is covered in red clay tiles and the eaves expose notched rafters and tongue and groove sheathing. Louvered attic vents appear in each gable end. Most of the windows are double-hung wood framed types, set deeply into the concrete walls. Most of the doors are newer solid core types lacking any design distinction. Only the most easterly portion of the building is open to view at this time, as the majority of the building has been encased in extensions and additions. The following description of those parts of the building that are visible progresses from the 14th Street side of the building around to the former front entry area. Each segment of the description is keyed to the map above.

View #1: This gabled elevation is in a mechanical and utility court area facing 14th Street. It exposes relatively plain concrete building walls with visual relief provided by window and door recesses, most of which have been filled in. A typical attic vent can be seen in the upper gable and a stucco covered chimney extends out of the roof. The varying grade exposes portions of the basement.

View # 2: The view to this side of the building is obscured by two modular buildings that were installed in 1985 (City Building Permit #34159) The original building is visible behind the modular building. The original building is characterized by an almost fully exposed basement level and typical wood framed double hung windows set deeply into the concrete walls of the building.

CONTINUATION SHEET

P3a Description

View #3: View #3 is similarly obscured by the placement of the above mentioned modular buildings. As with View #2, a portion of the original building wall is clearly visible, while the remainder of the wall is only visible by looking down the separation between the original building and the modular building. This elevation exposes a large portion of the basement level and is characterized by the wood framed double hung windows that are typical of the balance of the building.

View #4: View #4 is oriented directly toward the intersection of Magnolia Avenue and 14th Street. It is a typical gable end wall broken by windows typical of the balance of the building. A large part of the basement is exposed to view and a metal ramp with metal railing links the ground floor with the public sidewalk. A concrete stairway links the basement to the top of the mounded landscaped area.

View #5: Views 5, 6, and 7 are the most aesthetically pleasing elements of Building A. All of these frontages have a prominent visual presence on an mounded lawn area fronting Magnolia Avenue that is planted with a variety of trees, most notably palms. The basement element is not visible from the street in these views, however, nearer the building, basement windows can be seen in a recessed area. The details of this elevation are typical of the other elevations on the building, including double hung windows, wooden eaves with exposed rafters, and a relatively smooth poured in place concrete finish. Some of the windows in the basement area have been altered to accommodate air conditioning units.

View #6: View #6 is one of the other prime views revealing most of the fabric of the original Myron Hunt design. In the right corner of this elevation is a raised area that extends a gabled roof above the main roof line of the building. The original purpose of this raised area is unknown, however, it does lend some architectural interest to this corner of the building. The balance of this elevation is typical of the other elevations of the building, with double-hung windows dominating the overall composition.

View #7: This is the last of the views with significant original integrity that is open to the view of the general public. It is a simple gabled wall with windows and attic vent typical to the rest of the building. Access is via a raised concrete platform flanked by a metal railing.

View 8: This view and View #9 are only visible from a courtyard that is enclosed by the Health Education building and a metal fence covered in a dense grille. It is not accessible to the general public. The concrete wall of View #8 is penetrated by several double hung wood framed windows. This building wall once served as the easterly flank of the original hospital entrance courtyard.

View 9: The final view covered in this architectural description is also within the Health Education building's patio area, formerly part of the original hospital's entry courtyard. The easterly part of this elevation retains the integrity of the building as it existed in the 1950s, however, the gabled extension that once provided the

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

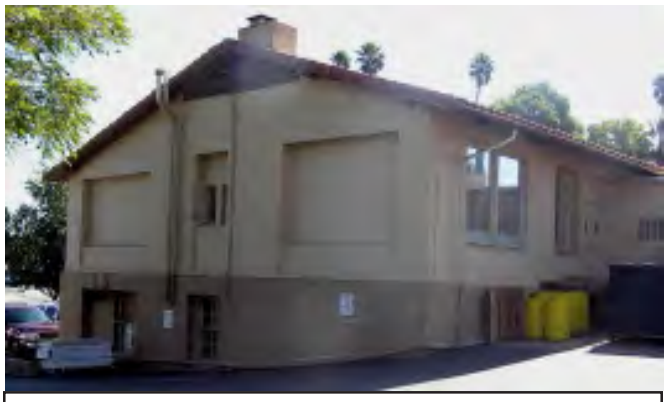
Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building A

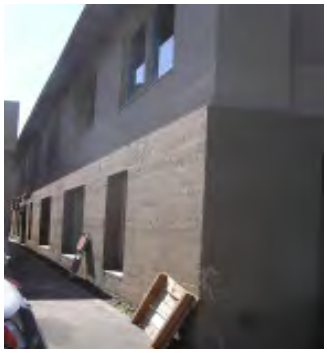
Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

main point of hospital access has been significantly altered. Formerly this gabled wall had a set of doors flanked by a pair of windows. In the upper part of the gable was an attic vent. All of these have been filled in and the overall wall has been covered in a rough textured stucco. Reminding the viewer of the former status of this wall is a pair of carriage type lamps that once provided exterior light to the hospital's entry. Aluminum fixed glass windows have been installed in the altered area.



BUILDING A - VIEW #1



BUILDING A - VIEW #2

BUILDING A - VIEW #3

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

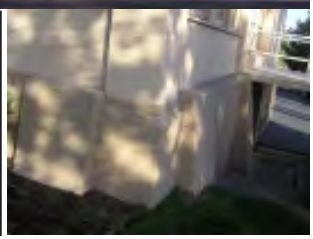
Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building A

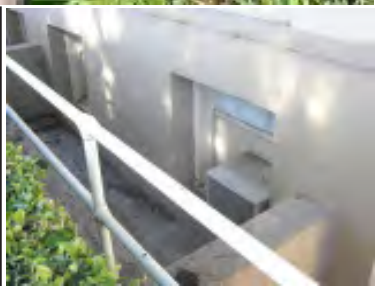
***Recorded by** Bill Wilkman M.A. ***Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

BUILDING A - VIEW #4



BUILDING A - VIEW #5



BUILDING A - VIEW #6

BUILDING A - VIEW #7

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

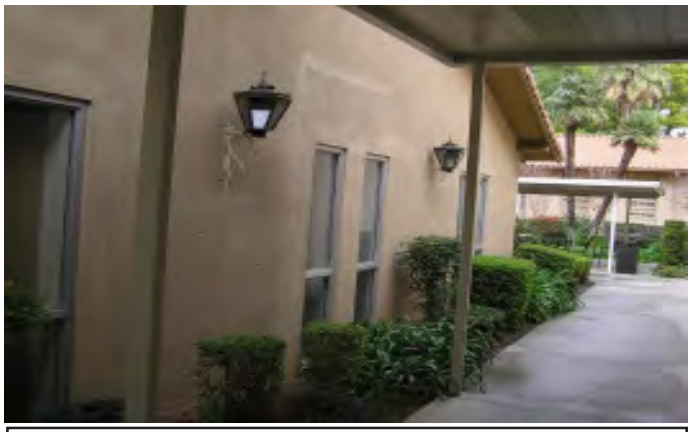
Primary # _____
HRI# _____
Trinomal _____

Page 5 **of** 18 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building A

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

BUILDING A - VIEW #8



BUILDING A - VIEW #9

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** Riverside Community Hospital - Building A **CHR Status Code:** 6L
B1. Historic Name: Riverside Community Hospital
B2. Common Name: Riverside Community Hospital - Building A
B3. Original Use: Hospital ***B4: Present Use:** Hospital
***B5. Architectural Style:** Spanish Colonial Revival
***B6. Construction History:** (Construction date, alterations, and date of alterations) Original building completed - 1925; Maternity Ward - 1949, demolition of maternity ward and portion of west wing - 1966
***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Myron Hunt **b. Builder:** Cresmer Manufacturing Company
***B10. Significance Theme:** Community Hospital development **Area:** Riverside, CA
Period of significance: 1925 **Property Type:** HP-41 Hospital **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

CONTINUATION SHEET

B10 Significance

a. Historic Context

Building A is the oldest hospital building on the existing hospital campus located between Brockton Avenue, Magnolia Avenue, Fourteenth Street and the south boundary of the Tequesquite Arroyo. Before Building A was completed in 1925, Riverside Community Hospital had occupied two other locations elsewhere in Riverside's downtown. These earlier institutions went by the name Riverside City Hospital. Below is a summary of those locations:

Riverside City Hospital - Orange Street Location: On December 2, 1901, several Riverside physicians met at the Tenth Street home of Dr. C. Van Zwallenburg to discuss the need for a city hospital. The doctors were tired of the lack of appropriate medical facilities and they knew that the County's hospital was not designed to meet the needs of private patients. Lacking a local private hospital, doctors were forced to do minor procedures in their offices or patients homes, and found it necessary to send patients with serious afflictions to hospitals in Los Angeles. The doctors agreed to fund a private hospital by selling stock at $1.00 per share. Each of the physicians present at the meeting committed to buying at least $100 worth of stock. (Riverside Community Hospital 2000: 2)

When sufficient funds had been collected, the Hospital Association leased a 12-room house at the southwest corner of Eleventh and Orange Streets to serve as the City's first hospital. Riverside City Hospital opened in this residence on October 30, 1902. Around the same time as the hospital's opening, the Hospital Association established a school of nursing.

Demand for hospital services increased quickly, and by 1903, the Orange Street hospital was overwhelmed with patients. Once again, Riverside physicians were forced to send many of their serious cases by train to Los Angeles. (Ibid: 3)

Riverside City Hospital - Walnut Street (Brockton Avenue) Location: To meet the need for expanded facilities, a new funding campaign was established and, before long, Riverside's citizens had purchased $21,335 worth of shares to build a new 30-bed hospital worth approximately $25,000. A site was chosen at the southwest corner of Walnut (now Brockton Avenue) and 11th Streets and, in May of 1904, a new two-story purpose-built hospital opened. The new facility included 19 single bedrooms and two wards. Concurrently with the opening of the new hospital, the nursing school graduated its first class of nurses, ready to staff the new institution. (Ibid: 4)

By the end of the decade, however, the City's growth to 50,297 residents was already straining the capacity of what was a state-of-the-art facility just six-years earlier. Helping to reduce demand on the hospital, the Riverside Women's Club organized the City's first County Clinic to provide care to those of little means. The first location for the Riverside County Clinic was rented space above the Keystone Drug

B10 Significance

Store at the corner of Eighth (now University Avenue) and Main Streets. Later, the clinic moved to the Loring Building across Main Street. (Ibid: 8)

The Riverside Nursing School quickly distinguished itself as a source of high-quality professional nurses. However, the nurses school was remote from the hospital, placing a burden on the nurses and often delaying the arrival of staff in emergencies. Mrs. Florence Barton Loring noticed this inefficiency while recovering in a private room in the Walnut Street facility. After being discharged, she addressed the need by donating $5,000 to build a new school and dormitory facility adjacent to the hospital, at the northwest corner of Walnut (now Brockton Avenue) and Twelfth Streets. The school was named the Olive Francis Barton Nurse's Home, in honor of Loring's mother. Later this building would be used to house the Riverside Osteopathic Hospital. (Ibid: 9) This nurses' school building still stands at the northwest corner of Brockton Avenue and 12th Street. Significantly altered, it is nonetheless readily identifiable by the original fanciful chimney.

World War I had a profound influence on the Walnut Street hospital. To meet the demands of war casualties, nurses and doctors were drawn away from private hospitals and clinics for service in the military. Eighteen nurses left Riverside City Hospital to assist in the war effort during World War I. Afterward, a worldwide influenza epidemic struck, taking more casualties than World War I. (Ibid: 10) With these additional pressures, coupled with deficiencies in the Walnut Street hospital's original design, the need for a new hospital was becoming clear.

Riverside City Hospital - Fourteenth Street/Magnolia Avenue Location: In 1920, Dr. Van Zwalenburg, the same physician who spearheaded to funding campaign for both the Orange Street and the Walnut Street hospitals, launched a funding effort for a new hospital on the Magnolia Avenue/Fourteenth Street bluff. . This time, however, instead of being owned by shareholders, Van Zwalenburg envisioned that the new hospital would be a nonprofit institution operating independent of the profit motives of share holders. To help fund the new hospital, shareholders in the Walnut Street hospital were asked to donate their shares back to the nonprofit entity. Eventually all of the shares were either donated or sold back to the hospital. The goal was to build an 85-bed facility with a project price tag of $250,000 (Riverside Community Hospital 2000: 13)

Prominent Los Angeles based architect, Myron Hunt, was chosen to design the new hospital. Hunt had already made a name for himself in Riverside by designing the Spanish Wing of the Mission Inn and the Riverside Municipal Auditorium. Riverside residents were anxious to see a new hospital with some of the design elements of these buildings.

Federal Census records indicate that Myron Hunt was born in Sunderland, Massachusetts on February 27, 1868. Later records show Hunt and his family in Chicago. Hunt attended Northwestern University in

B10 Significance

Evanston, Illinois finishing his education at the Massachusetts Institute of Technology. Hunt was an early member of Frank Lloyd Wright's Prairie School.

Moving to Pasadena, he formed the architectural firm of Hunt and Grey with local architect Elmer Grey. Hunt and Grey became popular with wealthy clients who hired them to design residences. Later, they won commissions designing a variety of institutional and commercial projects, including the California Institute of Technology's predecessor the Thorpe Institute, in Pasadena. The firm also drew plans for Occidental College in Los Angeles and Pomona College in Claremont, California. Besides their work on the Spanish Wing of the Mission Inn, the firm also won other important hotel commissions, including the Ambassador Hotel in Los Angeles and the Wentworth Hotel in Pasadena. The Wentworth later became the famous Huntington Hotel. Other prominent projects designed by the firm included the Rose Bowl and Henry Huntington's house, which later became the main art gallery of the Huntington Library complex. By 1912, Hunt had dissolved his partnership with Elmer Grey and had established a new partnership with Los Angeles architect Harold C. Chambers. With Chambers, Hunt designed libraries in Redlands, Palos Verdes Estates, Santa Barbara, and Pasadena. Hunt died in 1952 after retiring to Port Hueneme, California. (https://digital.lib.washington.edu/architect/architects/198/, Accessed 2009)

By 1921, $195,919 had been raised for the new hospital, however, in that same year the Walnut Street hospital caught fire and it had to close for two months for repairs. Despite this setback, fund raising continued and in 1922, a five-acre site was selected at the southwest corner of Magnolia Avenue and 14th Street. The purchase price was $10,000. (Riverside Community Hospital 2000: 14)

On December 8, 1923 a building permit was issued for the hospital, with the Cresmer Manufacturing Company listed as contractor. The hospital was assigned the new address of 4445 Magnolia Avenue. Valuation for the job was listed at $275,000, well above the $250,000 target. (City of Riverside Building Permit Number 6542) In March 1925, the new Magnolia Avenue hospital was opened.

While the physicians and osteopaths had cooperated in raising funds for the new hospital, after its opening, the MDs objected to having the osteopaths practicing side-by-side with them. At first the osteopaths were given a separate wing of Building A, but in 1928, the osteopaths moved to the former Olive Frances Barton Nurses Home building. By this time, the nurses had built a new facility adjacent to the new hospital and classes were being conducted in affiliation with Riverside Junior College. (Riverside Community Hospital 2000: 18-19)

The early years of the new hospital were fraught with debt problems. Landscaping proved to be an early obstacle and many of the needed plant materials were donated to the hospital. Most notable of these were the palm trees that now grace the northeast corner of the property at Magnolia Avenue and Fourteenth Street. These palms were donated to the hospital by noted palm tree authority and Riverside resident J.

B10 Significance

Harrison Wright to complement a palm grove he donated to Newman Park across Magnolia Avenue from the new hospital site. (*Riverside Daily Press,* 5-13-1925)

The Great Depression had a profound impact on Riverside Community Hospital. The City was particularly hard-hit by losses in its citrus industry. Issuance of building permits dropped from 407 in 1925 to just 32 in 1936. Fewer patients chose the services of Riverside Community Hospital and more patients sought the optional cost services of Riverside County Medical Clinic, then located in Building A's basement. Many patients could not even afford to pay the County Clinic's ten cent registration fee and the clinic often had to settle for as little as six to seven cents per patient. (Riverside Community Hospital 2000: 23-24)

By 1940, war was raging in Europe, and Riverside Community Hospital was forced to wage its own battle against tuberculosis. And, despite the hard economic times and the pressures of disease, Riverside Community Hospital was again placed on the list of approved institutions by the American College of Surgeons. (Ibid: 27)

On April 2, 1941, a new laundry facility was added to Building A. (Riverside City Building Permit #22972)

On December 7, 1941 the United States' entry into World War II brought new challenges to Riverside Community Hospital. As with World War I, many doctors and nurses enlisted to serve in the military. This loss of personnel was exacerbated as military facilities were opened or expanded. Among the military facilities in the area were March Field, Camp Hahn, and Camp Anza. In just three years, Riverside's population added some 10,000 new residents, many of whom were military transplants. To meet the unprecedented demand, almost every part of the hospital was converted to bed space, including X-ray rooms, screened porches, and the nurses training auditorium. Patient loads increased from 365 in 1941 to 559 in 1943. (Riverside Community Hospital 2000: 29)

The war ended in late 1945; however, pressures on Riverside Community Hospital continued, with a postwar baby boom that added a new challenge for hospital resources. The hospital responded by reopening its maternity ward and adding a Children's Wing in 1949. (Ibid: 31-32) Demands from the baby boom continued into the 1950s. In 1952 alone, 1,200 babies were born in the hospital. Other pressures were felt in the emergency room where 4,086 cases were handled and in the operating room where 1,844 operations are performed that year. (Ibid: 34)

Patient loads continued to increase as the 1950s unfolded, with the population of the City growing from 25,000 in 1925 to 60,000 in 1955. Surgical facilities designed for 1,800 surgeries were forced to accommodate 6,775 patients that year. (Riverside Community Hospital 2000: 38-39) By this tiime, Building A had reached its ultimate configuration and size. New wings had been added and every available

space had been converted to hospital uses. One significant change in this regard was the enclosure of open arcades along the front of Building A into administrative offices.

The subsequent construction of two new bed towers, known as Building D (1958) and Building B (1966) eliminated parts of Building A and enveloped other parts of the building within the walls of new construction. Today, only a small part of the original Building A remains open to view.

b. Historic Significance

Due to issues with architectural integrity, Building A does not qualify for historical designation at any level. WHS has assigned a CHR Status Code of 6L to this building, reflecting its ineligibility for historical designation, but with a caveat. The 6L Status Code is defined as follows: *"Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning."*

In regard to integrity, while, Views 4, 5, 6, and 7 retain integrity, they represent only a relatively small segment of the original building. Further, while the 14th Street elevations retain integrity, they are blocked from view by modular structures and, in any event, represent only the former "back door" to the hospital. Another major element compromising the integrity of the original Myron Hunt building is the placement of the Health Education Building (Building H) within the hospital's original landscaped entry courtyard. This placement essentially eliminates this once prominent open space and blocks the view to this once important building facade. Further compromising the integrity of this part of the building is the alteration of the entry itself, including the elimination of the entry doors and flanking windows. Other parts of this once prominent front facade have been encapsulated within additions that have taken place in the past 80 years.

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United States Geological Survey
1901 Riverside, California
1942 Riverside, California
1953 Riverside, California
1967 Riverside West, California (Photorevised 1980)

United States Department of Agriculture
1938 Aerial Photograph
1948 Aerial Photograph
1954 Aerial Photograph
1967 Aerial Photograph

Persons Consulted:

Virginia Austerman, Archaeologist

CONTINUATION SHEET

B12 References

Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Clinton Marr, Retired Architect
Tanya Sorrell, Architectural Historian
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital

Appendix E: **Primary Record & Building, Structure, Object Record**
Riverside Community Hospital - J. Harrison Wright Palm Grove- 4445 Magnolia Avenue

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

Trinomal_____
CHR Status Code 5S3

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 11 ***Resource Name or #** (Assigned by recorder.) J. Harrison Wright Palm Grove
P1. Other Identifier: Riverside Community Hospital
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4445 Magnolia Avenue, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 463330 **mN** 3756340
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-070-027
Southwest corner of Magnolia Avenue and Fourteenth Street
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) Bird's Eye View, www.maps.google.com, Accessed 2013

***P6. Date Constructed/Age & Sources:**
1925, *Riverside Daily Press*, 5-13-1925

☒ Historic ☐ Preshistoric ☐ Both
***P7. Owner and Address:**
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒ **Continuation Sheet** ☒ **Building, Structure, Object Record** ☐ **Archaeological Record** ☐ **District Record** ☐ **Linear Feature Record** ☐ **Milling Station Record** ☐ **Rock Art Record** ☐ **Artifact Record** ☐ **Photograph Record** ☐ **Other (List):**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomial _____

LOCATION MAP

Page 2 **of** 11 ***Resource Name or #** **(Assigned by recorder)** J. Harrison Wright Palm Grove

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980

LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

Page 3 **of** 11 ***Resource Name or #** **(Assigned by recorder)** J. Harrison Wright Palm Grove

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

The J. Harrison Wright Palm Grove is a random grouping of over two dozen palm trees situated on a mounded lawn area on the Community Hospital property at the important downtown intersection of Magnolia Avenue and Fourteenth Street. The trees are primarily a mixture of Washingtonia robusta and Washingtonia filifera palms. Across Magnolia Avenue is another historic palm grove situated within Newman Park. The pair of Palm groves create a dramatic entry statement at the edge of downtown Riverside.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name:** J. Harrison Wright Palm Grove **CHR Status Code:** 5S3
B1. Historic Name: J. Harrison Wright Palm Grove
B2. Common Name: Riverside Community Hospital, 4445 Magnolia Avenue, Riverside, CA
B3. Original Use: Hospital ***B4: Present Use:** Hospital
***B5. Architectural Style:** Not Applicable
***B6. Construction History:** (Construction date, alterations, and date of alterations) Landscaping installed 1925.

***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Myron Hunt **b. Builder:** Cresmer Manufacturing Company
***B10. Significance Theme:** Community Hospital development **Area:** Riverside, CA
Period of significance: 1925 **Property Type:** HP-41 Hospital **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

CONTINUATION SHEET

B10 Significance

a. Historic Context

The J. Harrison Wright Palm Grove is situated adjacent to what is known as "Building A" of the Riverside Community Hospital campus. This is the oldest hospital building on the existing hospital campus, and it is sitated at the northeast corner of the campus at the intersection of Magnolia Avenue and Fourteenth Street. The overall hospital campus is situated between Brockton Avenue, Magnolia Avenue, Fourteenth Street and the south boundary of the Tequesquite Arroyo. After out-growing two earlier hospital locations, in 1920, Riverside physician Dr. Van Zwalenburg , launched a funding effort for a new hospital to be situated at the southwest corner of Magnolia Avenue/Fourteenth Street. The goal was to build an 85-bed facility with a project price tag of $250,000 (Riverside Community Hospital 2000: 13)

Prominent Los Angeles based architect, Myron Hunt, was chosen to design the new hospital. Hunt had already made a name for himself in Riverside by designing the Spanish Wing of the Mission Inn and the Riverside Municipal Auditorium. Riverside residents were anxious to see a new hospital with some of the design elements of these buildings.

The early years of the new hospital were fraught with debt problems. Upon the hospital's completion, the cost of landscaping proved to be an obstacle and many of the needed plant materials were donated to the hospital. Most notable of these were the palm trees that now grace the northeast corner of the property at Magnolia Avenue and Fourteenth Street. These palms were donated to the hospital by noted palm tree authority and Riverside resident J. Harrison Wright to complement a palm grove he donated to Newman Park across Magnolia Avenue from the new hospital site. (*Riverside Daily Press,* 5-13-1925)

James Harrison Wright was born in Allegheny, Pennsylvania on August 23, 1861 to a wealthy banking and glass manufacturing family. J. Harrison and his brother Benjamin Bakewell Wright came to Riverside in the 1880s and established farms on opposite sides of Adams Street just west of Indiana Avenue. J. Harrison's farm was at 3502 Adams Street, where the Adams Plaza Shopping Center is now located. J.Harrison's house was a local landmark of sorts, a single story adobe with Mission Revival fluenced architecture. Typical of Spanish architecture, the home wrapped around a courtyard, with an open entry at the south. Wright referred to his home as "El Adobe". (Patterson 1996: 224)

In Riverside, Wright was a citrus farmer and was active in the citrus farming industry. He served as an alternate at the formative meeting of the Riverside Exchange of the California Fruit Grower's Exchange and took a keen interest in the efficient processing of citrus fruits. In a shop in J. Harrison's back yard, he and his brother developed what became known as the "Wright's Fruit Cleaning Machine". The device was patented in 1897 and was considered an advancement in fruit processing methods. (Ibid: 262)

CONTINUATION SHEET

B10 Significance

Wright was said to be an intellectual and a "polo-playing socialite" who became an authority on palm trees, planting many varieties in the elaborate gardens of his property. (Ibid:224) J. Harrison Wright never married, but lived with his sister Martha. (U.S. Census, 1880, 1900, 1920, 1930, and 1940) Wright donated palms from his gardens to Newman Park at the southeast corner of Magnolia Avenue and Fourteenth Street and to Riverside Community hospital at the southwest corner of Magnolia Avenue and Fourteenth Street. When his home was torn down and his property was redeveloped as a shopping center in 1966, many of the palms from his property were transplanted to Hunter Park in Rvierside.

J. Harrison Wright died in Riverside on August 3, 1941. (California Death Index)

b. Historic Significance

The J. Harrison Wright Palm Grove at the southwest corner of Fourteenth Street and Magnolia Avenue qualifies for local Landmark status as a cultural landscape, earning it a CHR Status code of 5S3. (Appears to be individually eligible for local listing or designation through survey evaluation) The criteria under which this landscape qualifies for historical designation are as follows:

Riverside Cultural Heritage Landmark Criteria:

1. Exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, architectural, or natural history;

2. Is identified with persons or events significant in local, state or national history;

4. Represents the work of a notable builder, designer, or architect, or important creative individual;

As noted earlier, the palm trees in this area were donated to the hospital by noted palm tree authority and Riverside resident J. Harrison Wright. (*Riverside Daily Press,* 5-13-1925) The placement of the palms at the corner was accomplished to balance with a grove of palms in Newman Park across Magnolia Avenue also donated by J. Harrison Wright. Newman Park is a City of Riverside Cultural Heritage Landmark, a status that relates to its J. Harrison Wright donated palm grove and its WPA statue of Juan Bautista de Anza. The Riverside Community Hospital palm grove cultural landscape includes all trees and turf in the landscaped area extending from the north elevation of Building H to the parking lot at the southwest corner of Magnolia Avenue and Fourteenth Street.

The following additional information pertains to this cultural landscape:

CONTINUATION SHEET

B10 Significance

- **Period of Significance:** 1925, the year the grove was planted.
- **Significance Theme:** Riverside Cultural Landscapes
- **Character Defining Features:**

  √ All palm trees.
  √ All other mature trees in the vicinity of the palm trees.
  √ The mounded turf area upon which the trees are planted.

B12 References

Books, Periodicals, and Web Sites

Ancestry.Com
Accessed 2013 California Death Index
Accessed 2013 Social Security Death Index
Accessed 2013 State and Federal Census Records

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1893: *History and Directory of Riverside County, 1893-94,* the Riverside Daily Press Job Office, Riverside, California

Davis, Rebecca and Sprinkle, Karen
1998 *Riverside's History From its First People to the Present.* Riverside Museum Press, Riverside, California

Elliott, Wallace W.
1883 *History of San Bernardino and San Diego Counties*, Wallace W. Elliott Company (Riverside Museum Press Reprint, Rubidoux Printing Company, Riverside, California, 1965)

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1902 *Historical and Biographical Record of Southern California.* Chicago, Illinois

Gunther, Jane Davies
1984 *Riverside County Place Names: Their Origins and Their Stories,* Rubidoux Printing Company, Riverside, California

Hall, Joan H.
1992 *A Citrus Legacy*, Highgrove Press, Riverside, California

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2003 *Cottages, Colonials and Community Places of Riverside, California*, Highgrove Press, Riverside, California

Hall, Joan H.

B12 References

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1996 *Missions of the Southern Coast*, Lerner Publications Company, San Francisco, California

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1964 *Landmarks of Riverside, and the Stories Behind Them.* Press-Enterprise Company, Riverside, California
1996 *A Colony for California: Riverside's First Hundred Years.* Second Edition. The Museum Press of the Riverside Museum Associates, Riverside, California

Riverside City Information Technology Department
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Riverside City Planning Department
2003 *Westside Update/Reconnaissance Surveys,* Prepared for the City of Riverside by Myra L. Frank & Associates, Inc, Los Angeles, CA
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Accessed 2013 www.riversideca.gov, Building Permit Records
Accessed 2013 http://olmsted.riversideca.gov/historic/ ppty_mtp.aspx? pky=2690

Riverside Community Hospital

B12 References

2000 *A Century Strong: One Hundred Years of Riverside Community Hospital,* Self Published, Riverside, California

Riverside Daily Press
1925 "Plant Gifts Help Beautify Grounds of New Hospital", *Riverside Daily Press,* 5-13-1925

Stonehouse, Merlin
1965 *John Wesley North and the Reform Frontier*, Minneapolis: University of Minnesota Press

Wilkman Historical Services
2009 *Draft Cultural Resources Impacts Evaluation of Riverside Community Hospital Bed Tower Replacement and Cultural Resources Survey and Evaluation of Original Hospital Building and Calvary Presbyterian Church,* Riverside, California
2013 *Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Cultural Resources Impacts Report,* Riverside, California

Maps and Aerial Photographs

Fairchild
1931 Aerial Photograph

Riverside County Flood Control and Water Conservation District
1963 Aerial Photograph

United States Geological Survey
1901 Riverside, California
1942 Riverside, California
1953 Riverside, California
1967 Riverside West, California (Photorevised 1980)

United States Department of Agriculture
1938 Aerial Photograph
1948 Aerial Photograph
1954 Aerial Photograph
1967 Aerial Photograph

Persons Consulted:

Virginia Austerman, Archaeologist

CONTINUATION SHEET

B12 References

Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Suzanne Rowlands, Palm Tree Collector
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital

Appendix F: **Primary Record & Building, Structure, Object Record**
Riverside Community Hospital - Building B - 4445 Magnolia Avenue

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

Trinomal_____
CHR Status Code 3CS

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 14 ***Resource Name or #** (Assigned by recorder.) Riverside Community Hospital - Building B
P1. Other Identifier:
***P2. Location:** ☐**Not for Publication** ☒**Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4445 Magnolia Avenue, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 463330 **mN** 3756340
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-070-027
Southwest corner of Magnolia Avenue and Fourteenth Street
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:**☒ Building☐ Structure☐ Object☐ Site☐ District☐ Element of District ☐ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) South (front) elevation, February 2013

***P6. Date Constructed/Age & Sources:**
1966, Riverside City Building Permit

☒Historic ☐Preshistoric ☐Both
***P7. Owner and Address:**
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒**Continuation Sheet** ☒**Building, Structure, Object Record** ☐**Archaeological Record** ☐**District Record** ☐ **Linear Feature Record** ☐**Milling Station Record** ☐**Rock Art Record** ☐**Artifact Record** ☐**Photograph Record** ☐**Other (List):**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomial _____

LOCATION MAP

Page 2 **of** 14 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building B

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980

LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

Building B is a 229,522 square foot, predominantly six-story, reinforced concrete building with basement. The flat roofed building's footprint assumes a prominent "V" shape, oriented toward a parking and receiving area in the southerly portion of the overall hospital site. The building assumes an overall horizontal stance, created by its prominent use of bands of windows, concrete awnings, and concrete spandrels.

Building B South Elevation: The south elevation has the building's strongest horizontal character, created primarily by its precast concrete awnings that shade the building's windows and extend unbroken from one end of the building to the other. Spanning the distance between the awning fascias and the building are aluminum louvers that further enhance the shading effect of the awnings. Vertically, the building is divided into bays by the building's structural concrete framework. Each bay is topped by a band of aluminum framed windows, situated atop precast concrete infill panel. Mechanical equipment on the roof is screened by a parapet consisting of similar concrete infill panels, spanning the spaces between the building's vertical structural elements. Centered on the first floor, at the vertex of the building's "V" is a prominent folded plate precast concrete canopy, supported by round columns. Below this canopy is a vestibule consisting of dark tinted windows framed in black anodized aluminum. This vestibule is a later addition and is not in character with the Mid-Century Modern style of the rest of the building.

Building B East Elevation: The east elevation is dominated by two prominent elements. In the southerly part of this elevation, the awning elements of the south elevation transition into the division points of an exterior staircase that extends up the full length of the building. Added later to this staircase are infill panels consisting of vertical steel tubing, designed to create a security barrier for those using the staircase. Originally the staircase was secured only at its first landing, by a low iron fence consisting of vertical steel pickets punctuated by decorative square sheet metal panels. A remnant of this design element remains in the form of a pair of gates at the foot of the stairs. The northerly portion of west elevation consists of a solid reinforced concrete wall, broken only by scoring that extends the building's theme of horizontal and vertical design elements.

CONTINUATION SHEET

P3a Description

Building B North Elevation: The north elevation is more varied than any of the other elevations. Like the south elevation, the prominent "V" footprint is apparent in this elevation, however, unlike the south elevation, it does not come to a point at the center. Rather the center is broken by a large vertical protrusion that houses elevators, interior stairways, mechanical equipment and the like. The building mass easterly of this protrusion is essentially a mirror image of the south elevation, consisting of horizontal awnings, windows, and infill panels between vertical structural elements. The building mass westerly of this center element has all of the design elements of the building wall easterly of the center element, with the exception of the precast concrete awnings. This side of the north elevation also extends a considerable distance to the north, stepping down from six, to three, to two stories as it extends north. The central protrusion is largely made up of reinforced concrete walls broken only by occasional windows, scoring, and some precast concrete balcony elements that mimic the awnings in the easterly plane of the north elevation.

Building B West Elevation: The west elevation is largely obscured by Building B's connection to Building C. To the extent that it is visible, it consists of nothing more than a solid reinforced concrete wall broken by vertical and horizontal scoring.

Building B Landscape/Site Features: Building B is characterized by only three prominent landscaped elements. Most significant in this regard is the landscaped parking lot in front of the south elevation, the landscaped area to the east of the parking lot and building, and the walkways that extend through these areas and along the south face of the building. A dominant element of the landscape is the use of Lemon Scented Gum Eucalyptus trees, the tall willowy branches of which help to soften the mass of concrete and glass that compose the south building walls. Adding shade and color to the landscape pallet are Coral and Magnolia trees. Seating and planter areas associated with the concrete walkways are punctuated by low rock veneer walls.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building B

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

BUILDING B - SOUTH ELEVATION

BUILDING B - SOUTH ELEVATION ENTRY

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

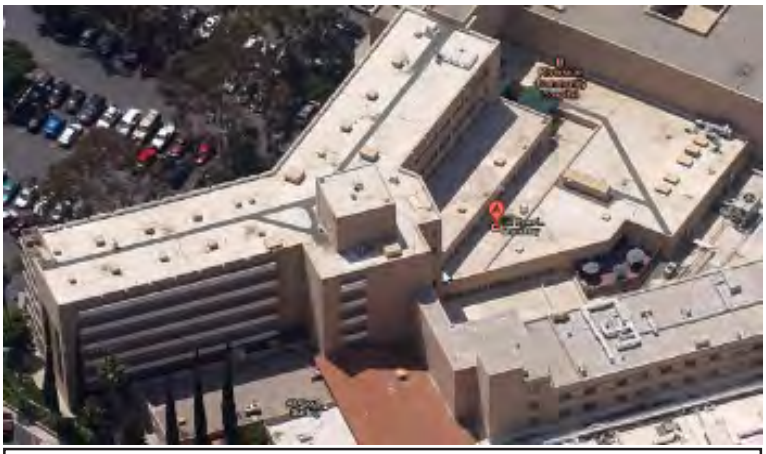
Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building B

***Recorded by** Bill Wilkman M.A. ***Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

BUILDING B - EAST ELEVATION

BUILDING B - EAST ELEVATION IRON GATE



BUILDING B - NORTH ELEVATION

BUILDING B - ROCK WALL AND SEATING AREA

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** Riverside Community Hospital - Building B **CHR Status Code:** 3CS
B1. Historic Name: Riverside Community Hospital
B2. Common Name: Riverside Community Hospital - Building B
B3. Original Use: Hospital ***B4: Present Use:** Hospital
***B5. Architectural Style:** Mid-Century Modern
***B6. Construction History:** (Construction date, alterations, and date of alterations) Completed 1966

***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Herman Ruhnau **b. Builder:** Unknown
***B10. Significance Theme:** Community Hospital development **Area:** Riverside, CA
Period of significance: 1925 **Property Type:** HP-41 Hospital **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

B10 Significance

a. Historic Context

Building B was completed in 1966 and was the third major hospital building on the Magnolia Avenue/ Fourteenth Street campus. The six-story, with basement, building was designed by prominent architect Herman Ruhnau in the Mid-Century Modern architectural style. Building B was preceeded in 1958 by Building D, an International Modern three-story hospital tower designed by Jay Dewey Harnish, and Building A, a single-story Spanish Colonial Revival style building designed by Myron Hunt.

Entering the 1960s, the hospital expressed its desire to be a major regional facility. In December of 1961, Hospital Administrator Ray Ernst revealed plans for a new 229,522 square foot bed tower to allow the envisioned growth to occur. Local Riverside architect Herman O. Ruhnau was chosen to design the new six-story, 200,000 square foot building. (Riverside Community Hospital 2000: 43)

Herman Ruhnau was born in Pasadena, California on September 1, 1912, but spent the better part of his youth in Santa Barbara. (Press Enterprise, 6-13-2006) In 1929, his family moved to Riverside, where Ruhnau completed is last two years of high school. From there, Ruhnau attended Riverside Junior College, moving on to the University of Southern California to receive an education in architecture. After college, Ruhnau went to work for several well-known architectural firms, and during World War II was an architect for the U.S. Navy's Bureau of Yards and Docks. (Paul 1954: 466) In 1946, Ruhnau opened a Riverside branch office for Los Angeles based architects Heitschmidt and Matcham. In 1950, he opened his own architectural firm in Riverside. (Christopher A. Joseph and Associates 2009: 27) In Riverside, he quickly became one of the City's most prolific architects. Among the Riverside projects for which his firm was responsible are the following:

- RCC Cosmetology Building (1957)
- Public Defender's Office, 4200-32 Orange St (1958)
- RCC Cutter Pool Complex (1957)
- Press Enterprise Building, 3514 14th St (1958)
- Marcy Library, 3711 Central Ave (1958)
- John Adams School, 8362 Colorado Ave (1958)
- UCR Entomology Building (1960)
- Community Hosp Bed Tower, 4445 Magnolia Ave (1966)
- UCR Health Services (1961)
- Riverside City Hall (1975)
- Riverside Police Department, 4102 Orange St (1965)
- Riverside County Law Library, 3535 Tenth Street (1969)
- La Sierra High School, 4145 La Sierra Avenue (1969)

(Ibid)

B10 Significance

Ground breaking for Building B was held on April 22, 1964 and it was completed in January of 1966 at a cost of $5.5 million. The building was designed in keeping with the then accepted "Medical Center" concept, in which all hospital needs could be met in one building. (*Riverside Press-Enterprise,* 1-30-1966: A-7)

The building added five new surgical rooms to the existing eight at the hospital. It also included separate wards for intensive care and new facilities for emergency care, outpatient treatment, maternity care, pediatrics, physical therapy, and pharmacy services. Only the first four floors were completed with the first phase of construction, the other two being left as shells for improvement at a later date. The building was also engineered to handle an additional two floors. The new facility increased the hospital's total bed capacity to 325. (Ibid)

Some loose ends remained even after the building was occupied. The Maternity Wing of Building A needed to be demolished, as it blocked direct access to the new bed tower. Also in need of final completion were corridors to the existing hospital buildings and the landscaping of the site. (Ibid)

b. Historic Significance

Building B was recently evaluated by Historic Resources Group (HRG) as part of the City's Modernism 2 historic resources survey. This evaluation found that Building B appears eligible for City of Riverside Cultural Heritage Landmark designation as well as for listing on the State Register of Historical Resources. These findings earned the building CHR Status codes of 5S3 and 3CS. The criteria under which the building qualifies for historical designation are as follows:

Riverside Cultural Heritage Landmark Criteria:

3. Embodies distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;

4. Represents the work of a notable builder, designer, or architect, or important creative individual;

State Register of Historical Resources Criteria:

3. Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possesses high artistic values, or

B10 Significance

that represents a significant and distinguishable entity whose components may lack individual distinction.

In support of Building B's qualifications for the above criteria, the HRG report states that Building B "....is an excellent example of a Mid-Century Modern institutional building in Riverside, designed by significant local architect Herman Ruhnau (1912-2006). Mid-Century Modern is a term used to describe the evolution of the International Style after World War II. Mid-Century Modern architecture is more organic and less doctrinaire than the International Style, and it is characterized by more solid wall surfaces. Riverside Community Hospital exhibits significant character defining features of the style, including rectangular massing, clear expression of form, and horizontal bands of flush windows.

Only two alterations detract from the architectural integrity of Building B. One is the black anodized aluminum framed entry vestibule and the other is the enclosure of the exterior staircase with tubular steel bars. both of these alterations are reversible. Overall, the building retains excellent integrity, and these two deviations do not significantly detract from the building's integrity.

The following additional information pertains to this building:

- **Period of Significance:** 1966, the year the building was completed.
- **Significance Theme:** Modern Architecture and Architects of Modernism
- **Character Defining Features:**

  √ Concrete awnings with aluminum louvers
  √ Concrete structural elements, most prominently those dividing the building vertically
  √ Horizontal bands of clear anodized aluminum framed windows
  √ Waffle pattern concrete infill panels
  √ Extension of concrete awnings to following the pattern of the exterior staircase
  √ Scored concrete wall masses
  √ Folded plate entry canopy
  √ Rock veneer retaining and garden walls
  √ Lemon Scented Eucalyptus trees in the parking area.

B12 References

Books, Periodicals, and Web Sites

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1961 "Hospital Expansion Plans Nearly Ready", *Riverside Daily Press,* 12-27-1961
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Accesssed 2013 http://www.reed construction data.com/companies/21207/hmc-architects/

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Wilkman Historical Services
2009 *Draft Cultural Resources Impacts Evaluation of Riverside Community Hospital Bed Tower Replacement and Cultural Resources Survey and Evaluation of Original Hospital Building and Calvary Presbyterian Church,* Riverside, California
2013 *Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Cultural Resources Impacts Report,* Riverside, California

Maps and Aerial Photographs

Fairchild
1931 Aerial Photograph

Riverside County Flood Control and Water Conservation District
1963 Aerial Photograph

United States Geological Survey
1901 Riverside, California
1942 Riverside, California
1953 Riverside, California
1967 Riverside West, California (Photorevised 1980)

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B12 References

United States Department of Agriculture
1938 Aerial Photograph
1948 Aerial Photograph
1954 Aerial Photograph
1967 Aerial Photograph

Persons Consulted:

Virginia Austerman, Archaeologist
Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Tanya Sorrell, Architectural Historian
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital

Appendix: G **Primary Record & Building, Structure, Object Record**
Riverside Community Hospital - Building D - 4445 Magnolia Avenue

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

Trinomal_____
CHR Status Code 6Z

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 11 ***Resource Name or #** (Assigned by recorder.) Riverside Community Hospital - Building D
P1. Other Identifier:
***P2. Location:** ☐**Not for Publication** ☒**Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4445 Magnolia Avenue, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 463330 **mN** 3756340
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-070-027
Southwest corner of Magnolia Avenue and Fourteenth Street
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:**☒ Building☐ Structure☐ Object☐ Site☐ District☐ Element of District ☐ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) East (front) elevation, February 2013

***P6. Date Constructed/Age & Sources:**
1958, Riverside City Building Permit

☒Historic ☐Preshistoric ☐Both
***P7. Owner and Address:**
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒**Continuation Sheet** ☒**Building, Structure, Object Record** ☐**Archaeological Record** ☐**District Record** ☐ **Linear Feature Record** ☐**Milling Station Record** ☐**Rock Art Record** ☐**Artifact Record** ☐**Photograph Record** ☐**Other (List):**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomal _____

LOCATION MAP

Page 2 **of** 11 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building D

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980

LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

Building D is a reinforced concrete building of International Modern architectural style. It is a simple generally rectangular three-story with basement building capped by a flat roof. The south end of the building includes a vertical projection to house elevator equipment and a small fourth floor area housing hospital functions is situated adjacent to the elevator tower.

Building D South Elevation: It is immediately apparent when viewing the south elevation of Building D, that it has been significantly altered. This alteration consists of the addition of an enclosed corridor from Building B which completely eliminates the horizontal bands of windows that once gave this elevation its character. The corridor element is completely windowless, leaving this side of the building with a massive, monolithic appearance. This elevation is significantly obscured from view at the ground level by Buildings A and B, however, so the lack of design interest does not significantly impact the overall appearance of the hospital.

Building D East Elevation: The reinforced concrete wall of the east elevation gains its character from its horizontal bands of metal framed windows situated within a linear concrete surrounds. The first floor of this elevation is completely blocked by an adjacent building. The east elevation's southerly end is punctuated by a two step raised area. One of these consists of the elevator equipment tower and the other consists of a small segment of fourth floor.

Building D North Elevation: The north elevation appears in two distinct steps. The most northerly of the steps houses an exterior staircase and is characterized by two simple vertically oriented openings that provide light and air to the two levels of the staircase at which they are situated. The other wall plane is situated to the south of the above described wall plane. On its west side, the staircase is exposed via two openings. Its southerly face is a large unbroken concrete wall that extends past the plane of the west elevation to form a wing wall. The first floor of this face of Building D is completely obscured by an adjacent building.

Building D West Elevation: Building D's west elevation is identical to the east elevation, except the windows are shaded with slatted metal awnings. This additional element gives this side of the building a decidedly different appearance from the east elevation. Like the east elevation, the first floor of the west elevation is completely obscured by an adjacent building.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 *Resource Name or # (Assigned by recorder) Riverside Community Hospital - Building D

*Recorded by Bill Wilkman M.A. *Date July 29, 2013 ☒ Continuation ☐ Update

P3a Description

BUILDING D - SOUTH AND EAST ELEVATIONS

BLDG D - NORTH AND WEST ELEVATIONS

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** Riverside Community Hospital - Building D **CHR Status Code:** 6Z
B1. Historic Name: Riverside Community Hospital
B2. Common Name: Riverside Community Hospital - Building D
B3. Original Use: Hospital ***B4: Present Use:** Hospital
***B5. Architectural Style:** International Modern
***B6. Construction History:** (Construction date, alterations, and date of alterations) Building completed 1958

***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Jay Dewey Harnish **b. Builder:** Unknown
***B10. Significance Theme:** Community Hospital Development **Area:** Riverside, CA
Period of significance: 1958 **Property Type:** HP-41 Hospital **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

CONTINUATION SHEET

B10 Significance

a. Historic Context

Building D was the second major hospital building on the Riverside Community Hospital Campus. Building A was completed in 1925 and was the first hospital building on the Magnolia Avenue/Fourteenth Street campus. The single story, with basement, building was designed by prominent architect Myron Hunt in the Spanish Colonial Revival architectural style. Building A was followed in 1958 by Building D, an International Modern three-story hospital tower situated adjacent to and north of Building A.

As early as 1953, it was clear that Building A would not be able to meet the expanding needs of the hospital. To address these increased demands, a three-year fund-raising campaign was initiated to build a multi-story bed tower. J.B. Hunter of Hunter Douglas Aluminum Corporation spearheaded the fund-raising campaign, with his firm contributing $50,000 to the effort. Later he personally donated $25,000 after his son's life was saved by hospital emergency room personnel. (Riverside Community Hospital 2000: 38) A surprise donation was offered by Mrs. Arthur McCallum, who spontaneously offered $5,000 toward the building during a meeting at which the hospital Board of Directors was explaining the plans for the new addition. (*Riverside Daily Press,* 11-23-1955) Many other local businesses also contributed to the new building, including Johnson Tractor Company, Citizen's National Trust and Savings Bank of Riverside, Flaherty and Adams Insurance, Bailey Patterson Insurance, Service Rock Company, Swiss Dairy, and Thompson Colgate Attorneys. (*Riverside Daily Press,* 9-23-1953)

The commission to design the building was awarded to Jay Dewey Harnish of Ontario, California. Harnish was born on May 21, 1898 in Pennsylvania and died on July 6, 1991 in Ontario, California. (California Death Index) Mr. Harnish opened his practice in 1940 as an independent architect in Ontario, California. His firm began by designing government housing during World War II, but soon expanded into the design of a wide variety of mostly institutional projects. Among these were 75 schools and 25 hospitals throughout Southern California. In 1960, his firm took on partners Jack Causey and Mel Morgan to become Harnish, Morgan & Causey. Among the hospitals his firm designed were San Antonio Community Hospital, Pomona Valley Hospital, Covina Intercommunity Hospital, Whittier Presbyterian Hospital, and Fontana Kaiser Permanente Hospital. (*Los Angeles Times,* 7-9-1991) His firm also designed San Bernardino Community Hospital #2, Garfield Hospital and Sanitarium in Glendale, CA, and Garfield Hospital, in Monterey Park, CA. (https://digital.lib. washington.edu/architect/architects/1056/, Accessed 2013)

Harnish retired in 1978, at which point his firm became HMC Architects. This firm continues to practice today and is among the larger planning and design firms in California. The firm has a total of 10 offices throughout California and Nevada. (http://www.reed construction data.com/companies/21207/hmc-architects/, Accessed 2013)

B10 Significance

The new 3-story Riverside Community Hospital bed tower was designed to include a basement, and engineered to accommodate three additional floors. . An early design concept for this building depicted it with a continuation of the Spanish Colonial Revival architectural influence of Building A. The final building design had a decidedly International Modern appearance. As noted above, Harnish's firm designed a large number of hospitals. All of these were designed in a similar International Modern style.

Building permit files do not include the permit for Building D; however, a *Riverside Daily Press* article documented the ground breaking for the first phase of construction as having taken place on August 11, 1954. The first phase consisted of the construction of a boiler room and laundry. *(Riverside Daily Press,* 8-12-1954) About a year later, the new boiler room and laundry had been completed. In an article about this accomplishment, *Riverside Daily Press* reported that, with these facilities on-line, the hospital would proceed to demolish the old laundry and begin pouring foundations for the new bed tower in its place. (*Riverside Daily Press, 9-23-1955)*

Originally projected to cost $640,000, the final tab was about a million dollars. The new building had a capacity of 240 patients and included two minor and four major operating rooms, a cytoscopic operating room, a fracture room, a postoperative recovery room, an X-ray department, and an emergency facility. For the first time, patients were able to recover in air conditioned rooms. (Riverside Community Hospital 2000: 40-41) Building D also incorporated the first use of piped oxygen to each room. (*Riverside Daily Press,* 9-23-1953) Hosptial records indicate Building D was completed in 1958.

Today, Building D is largeley obscured by later construction.

b. Historic Significance

Due to issues with architectural integrity, Building D does not qualify for historic designation at any level. Significant integrity issues include the fact that all of the first floor elevations are obscured by other buildings and the fact that the south elevation is largely altered and obscured by the extension of an enclosed corridor from Building B.

B12 References

Books, Periodicals, and Web Sites

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Accessed 2013 Social Security Death Index
Accessed 2013 State and Federal Census Records

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Fairchild
1931 Aerial Photograph

Riverside County Flood Control and Water Conservation District
1963 Aerial Photograph

United States Geological Survey
1901 Riverside, California
1942 Riverside, California
1953 Riverside, California
1967 Riverside West, California (Photorevised 1980)

United States Department of Agriculture
1938 Aerial Photograph
1948 Aerial Photograph
1954 Aerial Photograph
1967 Aerial Photograph

CONTINUATION SHEET

B12 References

Persons Consulted:

Virginia Austerman, Archaeologist
Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Tanya Sorrell, Architectural Historian
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital

Appendix H: **Primary Record & Building, Structure, Object Record**
Riverside Community Hospital - Building N - 4000 Fourteenth Street

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

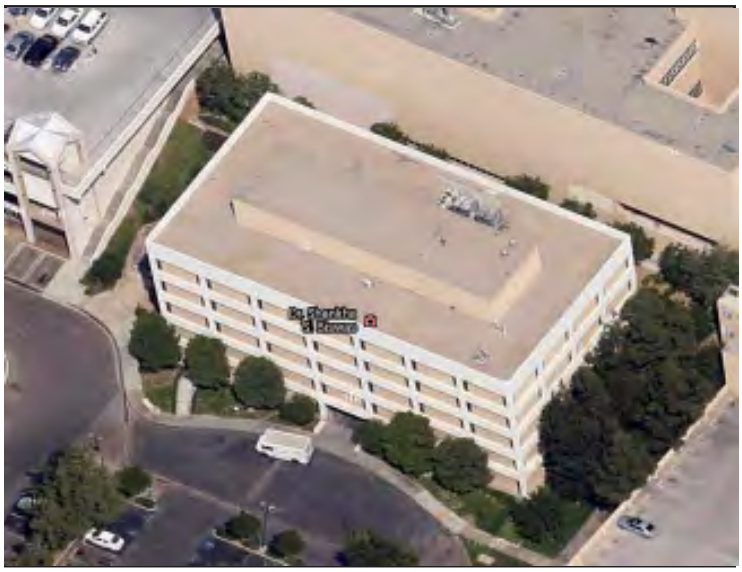
Trinomal_____
CHR Status Code 6Z

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 15 ***Resource Name or #** (Assigned by recorder.) Riverside Community Hospital - Building N
P1. Other Identifier:
***P2. Location:** ☐**Not for Publication** ☒ **Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4000 14th Street, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 464450 **mN** 3759657
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-300-009
South of 14th Street, east of Brockton Avenue
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:**☒ Building☐ Structure☐ Object☐ Site☐ District☐ Element of District☐ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) Birds Eye View, www.google.maps.com ,Accessed 2013



***P6. Date Constructed/Age & Sources:**
1976, Riverside City Building Permit

☒Historic ☐Preshistoric ☐Both
***P7. Owner and Address:**
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒**Continuation Sheet** ☒**Building, Structure, Object Record** ☐**Archaeological Record** ☐**District Record** ☐ **Linear Feature Record** ☐**Milling Station Record** ☐**Rock Art Record** ☐**Artifact Record** ☐**Photograph Record** ☐**Other (List):**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomial _____

LOCATION MAP

Page 2 **of** 15 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building N

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980

LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

This five-story office building has a rectangular floor plan and is situated on a concrete foundation. The building is capped with a flat roof flanked by a reinforced concrete parapet at its perimeter and a plaster finished mechanical penthouse in its center. The exterior walls consist of a reinforced concrete framework that forms a horizontally oriented rectangular grid. Infilling the spaces between the grid are nonstructural walls consisting of 8" by 16" split-face concrete block. Each end of each infill panel contains a bronze anodized aluminum framed fixed glass window with solid spandrel wainscot. The building is generally symmetrical, with all sides having essentially the same design.

The building is recessed into the side of the Tequesquite Arroyo, allowing it to be situated very close to Building C, the Critical Care Tower, located on the bluff above Building N. Building C was built at a later date than Building N, however, so the original intent was to facilitate access between Building N and Building B, the present main bed tower. The position of the building allows ingress and egress from the first floor on the west and from the third floor on the east. The first floor access is located at the arroyo bottom, where parking and access are relatively unconstructed compared to the more intensely developed part of the hospital campus on the bluff. This access point is primarily for the use of patients. The third floor door is situated at the level of the upper hospital campus and is primarily designed to facilitate travel by doctors between the hospital and their offices. Both the first and third floor openings consist of dark bronze anodized aluminum framed storefront glass and glass doors.

Dense landscaping around all four sides of the building soften its edges and give it a park-like setting. Landscaping at the front of the building (west elevation) is situated in a curvilinear planter that introduce a sense of natural flow to the otherwise rectilinear nature of the building. On the north side of the building is a utility yard enclosed with split-face block concrete walls and used for outdoor storage and mechanical equipment. Vehicular access to this area is provided via a concrete driveway and metal gates. A wall at the north end of this space retains a landscaped slope leading up to a set of stairs and the Building G parking structure. The area beyond the building to the east is generally at grade with the top of the arroyo and is improved with a concrete walkway and densely landscaped planter areas. The slope below the walkway is partially retained by a concrete block wall above which is an engineered landscaped slope that extends up to a tubular rail that secures the edge concrete walkway. Pedestrian level light standards provide security lighting at regular intervals along the walkway railing. The area between the retaining wall and the east elevation building wall consists of a concrete lined swale designed to carry water away from the building. Another concrete swale is situated between the base of the slope and the top of the retaining wall to help control water in that area. Bridging the gap between the building and the walkway at the top of the slope is a concrete walkway flanked by concrete stem-walls that are topped by short tubular steel railings.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building N

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

BUILDING N - PARKING LOT VIEW

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

Page 5 **of** 15 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building N

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

BUILDING N - REAR ELEVATION & WALKWAY

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** 4Riverside Community Hospital - Building N **CHR Status Code:** 6Z
B1. Historic Name: Riverside Community Hospital Professional Office Building
B2. Common Name: Riverside Community Hospital - Building N
B3. Original Use: Hospital ***B4: Present Use:** Hospital
***B5. Architectural Style:** Mid-Century Modern
***B6. Construction History:** (Construction date, alterations, and date of alterations) Completed 1976

***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Clinton Marr **b. Builder:** J.D. Diffenbaugh Construction
***B10. Significance Theme:** Community Hospital development **Area:** Riverside, CA
Period of significance: 1976 **Property Type:** HP-41 Hospital **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

B10 Significance

a. Historic Context

Riverside Community Hospital falls, geographically, into two areas, an upper campus and a lower campus. The upper campus is situated on a bluff over the Tequesquite Arroyo. The lower campus is situated within the Tequesquite Arroyo. The upper hospital campus was the first to be developed, beginning with a sprawling single-story Spanish Colonial Revival style building designed by Myron Hunt and completed in 1925. The upper hospital campus continued to grow over time, first with the addition of a three-story bed tower designed by Dewy Harnish, completed in 1958, and then with a six-story bed tower designed by Herman Ruhnau, completed in 1966. From there, the upper hospital campus continued to add buildings until there was no more room for construction on the bluff. The area below the upper hospital campus was largely devoted to Evans Athletic Park, a sports complex composed primarily of baseball diamonds. Evans Athletic Park was established in 1906 when Samuel Evans Jr. donated the land to the city to be used by area schools, most of which lacked adequate athletic grounds. Over time, Evans Athletic Park became more of a community park, with most of its activities centered around baseball played by both local teams and Minor League teams. As such Evans Athletic Park became an important community sports venue, especially important during the Great Depression, when inexpensive entertainment was in high demand. Baseball games played at night were among the most popular activities. Known as “Night Ball” these games attracted large throngs of spectators. Also popular, but less consistent, was spring training baseball, played by Minor League teams. The City’s inconsistent maintenance of the ball diamonds led teams to chose other venues during some years. During World War II, Evans field was an important venue for ball games by military teams, many of which included Major League ball players who had enlisted or had been drafted. The military games brought to Evans Athletic Park, its first racially integrated ball games.

Toward the late 1960s, Riverside Community Hospital’s need for land onto which to expand became critical and the hospital sought the use of the Evans Athletic Park lands. Building N was the first penetration of the hospital into the park. At that time, the hospital was plagued by a lack of doctors’ offices in near proximity to the hospital and a strategically placed building was needed to address this shortcoming. The hospital made an arrangement with the City whereby it would gain title to the park lands in exchange for land the hospital would donate for park purposes elsewhere. The hospital acquired a former dairy west of the hospital property for this purpose. Eventually, despite protests from citizens who felt the park should not be traded, the hospital gained title to the park.

Building N was the first penetration of the arroyo park lands by the hospital. The Evans Park land swap cleared the way to build on the arroyo bottom and on February 7, 1975 the City issued a building permit for Building N.

The building was completed and issued an occupancy permit on January 9, 1976. Designer of the building

B10 Significance

was local architect Clinton Marr, with Riverside contractor J.D. Diffenbaugh handling construction. (Riverside Building Permit #23420)

b. Historic Significance

The terminology of Modern Architecture is still being defined and there is not complete agreement among architectural historians as to what names should be applied to the style variations within Modern Architecture. Using the City's Modernism Context Statement, this building would be classified as an example of Mid-Century Modern.

The criteria for National Register Listing specify that a property that has achieved significance within the past 50-years shall not be considered eligible for the National Register unless it is of exceptional importance. Neither the State Register, nor the City of Riverside's criteria for a cultural resource mention the 50-year benchmark; however, most agencies use 50-years as a general rule of thumb. The idea is that it takes time to have sufficient perspective to judge historical importance; but as noted above, there are no hard-and-fast rules on how much time is necessary to gain this perspective. The 1975 completion date of Building N would give it an age of approximately 38-years, and it could be argued that in the realm of Modern Architecture, a 38-year perspective should allow a reasonable conclusion to be reached regarding the potential historical importance of a building.

Determining the historical significance of a building is typically based on two broad criteria. First, was the building associated with any events or persons significant in history. And, second, is the building significant for its architecture or engineering.

WHS did not uncover any information that would suggest Building N was the location of significant events, or that it was associated with significant persons other than its architect, Clinton Marr. If it is to qualify for historical designation, then, its importance would need to be based on the significance of its architecture. Part of the consideration of architecture as a standard for designation is the architect with whom the building is associated. In the case of Building N, it is associated with one of Riverside's more significant architects, Clinton Marr. The next question is, whether this building is an exceptional example of Mr. Marr's works and/or if it is an exceptional example of its architectural style.

The information gathered in the preparation of the Modernism Context Statement included the following biographical information on Clinton Marr: Mr. Marr was born in Ontario, California in 1925, and grew up in Riverside, California. During World War II, he joined the Navy Air Corps and following his enlistment, enrolled in the University of Southern California's School of Architecture. Mr. Marr considered a career in aeronautical engineering; however, his desire for greater freedom of

B10 Significance

expression led him to choose the field of architecture. He took instruction from such accomplished architects as Quincy Jones, William Perriera, Gregory Hane, and Cal Strong. (Christopher A. Joseph and Associates 2009) During his studies, Mr. Marr developed an affinity for the principles of Modern Architecture, particularly the idea that a building's structure should be clearly expressed in its design and the philosophy that a building should complement its environment. He found these ideals expressed in the Japanese Garden House concept and learned to respect Frank Lloyd Wright, Quincy Jones, the Greene Brothers, and the German Bauhaus School. (Modernism Context Statement Clinton Marr Oral History Interview, 2009)

Mr. Marr enhanced his education by working part-time for Albert C. Martin and Associates in downtown Los Angeles. After his GI Bill funded education was completed in 1953, he went to work for Clare Henry Day in Redlands and then for Herman Ruhnau in Riverside. In 1956, he opened his own architectural firm in Riverside, quickly gaining the attention of community leaders for his design abilities. Highly visible commissions, such as Wesley United Methodist Church in 1956 and the Lily Tulip industrial plant in 1958 enhanced his reputation as an innovative and creative architect capable of handling a wide range of design challenges. (Christopher A. Joseph and Associates 2009) Mr. Marr's stature grew rapidly and he went on to design an impressive array of commercial, industrial, institutional, educational, and residential projects, both in Riverside and beyond. Notable designs completed by Mr. Marr include:

Wesley United Methodist Church, 5770 Arlington Avenue (1956)
Lily Tulip Cop Corporation, 800 Iowa Avenue (1958)
Standard Insurance Company, 3380 Fourteenth Street (1961)
The Marr Residence, 6816 Hawarden Drive (1961)
Provident Federal Savings and Loan, 3656 Central Avenue (1962)
Grace United Methodist Church, 1085 Linden Street (1966)
Riverside County Board of Education, 3939 Thirteenth Street
Riverside Municipal Airport Building, 6951 Flight Road (1968)
(Ibid)

During the Modernism Context Statement Oral History Interviews, Mr. Marr was asked to name some of what he considered to be his best works. He noted several buildings that particularly reflected his architectural creativity and philosophy. These included the Hemet and Riverside branches of Provident Bank, the Marr Residence, John North High School, George Washington Elementary School, and the Riverside Hall of Justice. Mr. Marr expressed particular affinity for the Hemet branch of Provident Bank, a commission he said offered considerable opportunities to express his design philosophies. (Modernism Context Statement Clinton Marr Oral History Interview, 2009)

B10 Significance

WHS interviewed Clinton Marr on May 10, 2013 to learn more about Building N and to discuss its place in his overall architectural portfolio. Mr. Marr related that Building N was designed to solve a particular problem for the hospital. Doctors practicing at the hospital often had to commute from offices distant from the hospital campus. There was a need for a facility, where doctors could maintain an office space near the hospital. In this way doctors could access hospital resources for patient treatment, and use a nearby office space for business and clinical needs. (WHS-Marr Interview, 5-10-2013)

Mr. Marr explained that the building's design needed to satisfy two very important criteria. First, it needed to have convenient physician access to the hospital's main bed tower (Building B), while also providing convenient parking and access for patients. Second, it needed to have a flexible interior design that would accommodate a variety of office space sizes and layouts. (Ibid)

The solution to the first challenge was to build a multi-story building into the side of the arroyo with two points of ingress and egress. The primary patient access point was situated at the building's lower level, immediately adjacent to a large surface parking lot, easily accessible from Brockton Avenue and Fourteenth Street. Doctors would also use this access point, but more importantly the design included a third floor entry/exit point, at about the same level as the hospital bed tower on the bluff that would allow doctors to easily travel from their office space to the bed tower. (Ibid)

The solution to the interior design challenge was to create a building with a structural system concentrated at the building's perimeter, with windows strategically located to allow flexibility in office layout. (Ibid)

Another factor that influenced the design was security. Mr. Marr also noted that Building N was constructed at a time of civil unrest and building owners typically preferred building exteriors that would be damage resistant. The use of such substantial materials as reinforced concrete and concrete block helped satisfy this desire for security. Mr. Marr said he felt the design met all of these challenges and that the building has served the hospital's needs well for nearly 40-years. (Ibid)

Mr. Marr observed that building directly reflects his philosophy that a building's structure should be a prominent part of its design. And, the reinforced concrete framework of Building N is, in fact, a central part of its design. Mr. Marr noted that the concrete block infill between the reinforced concrete structure is not an essential part of the building's structural integrity, and should another infill material be desired in the future, including more glass, the building was designed to accommodate this without the need for significant additional engineering. Mr. Marr said he considered other infill materials besides the concrete block that was used, but the block seemed to

B10 Significance

be well suited to the purpose of the building and the need to have flexibility in the layout of its interiors. (Ibid)

Mr. Marr referred to Building N as a "straightforward building" that made use of concrete for its structure and clearly expressed that in its design. He said he believed it to be a "good building" that solved the problems presented to him by the hospital. He noted, however, that other building commissions have given him a greater opportunity to express his creativity. He felt one of the best examples of this can be found in the Provident Bank building at 1690 East Florida Avenue in Hemet. This one-story building strongly expresses its structure in the building's design and does so in a variety of ways. The exterior structure is expressed in reinforced concrete columns and a two-tier roof system with bold fascias on both levels and clerestory windows in the upper tier. the ceiling features a waffle pattern concrete design that accommodates lighting and mechanical systems in a manner that is functional , structural, and aesthetic. The building presents itself in various planes and its perimeter walkway gives it the appearance that it is floating above the site. (Ibid)

In Riverside, Mr. Marr made reference to the Standard Insurance Building (now occupied by Riverside County Schools) at the southeast corner of Olivewood Avenue and Fourteenth Street. Like the Hemet bank, this multi-story building clearly expresses its structure in the building's design and does so with a sense of depth and dimensional variety not found in Building N. Also, like the Hemet building, the Standard Insurance building seems to hover over its site in a most graceful fashion. (Ibid)

Another Riverside example referred to by Mr. Marr is the Riverside County Office of Education building at 3939 Thirteenth Street, on the north side of Thirteenth Street, between Almond and Chestnut Streets. It is another example of a building that expresses its reinforced concrete structure externally, but unlike Building N, it offers more depth and variety in its design. (Ibid)

There is no question that Building N was designed by a significant architect of the Modern era. The portfolio of Clinton Marr designed buildings both within Riverside and beyond is impressive. So the next question to be answered is whether Building N is among Mr. Marr's more significant works. And, within that realm, the question is whether it is among the most significant of this building's type within the realm of Mr. Marr's portfolio.

The most distinctive characteristic of Building N is that its design is centered on its structure. In this case, the building's structure is reinforced concrete and this material is clearly dominant in the building's architecture. WHS believes that, while Building N is a competently designed and functionally efficient building, it is not among the most creative examples of Clinton Marr's use of reinforced concrete as a central structural and design element. In the City of Riverside, at least two other buildings are better examples of a Marr designed building with an exposed concrete structural

CONTINUATION SHEET

B10 Significance

design focus. The two buildings referred to are the Standard Insurance Building and the County Office of Education Building described and displayed above.

Accordingly, WHS has determined that Building N does not qualify for historic designation at any level and is therefore assigned a 6Z CHR Status Code. (Found ineligible for NR, CR, or Local designation through survey evaluation.) Building N is, therefore, not a historic resource for purposes of CEQA.

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1967 Riverside West, California (Photorevised 1980)

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1938 Aerial Photograph
1948 Aerial Photograph
1954 Aerial Photograph
1967 Aerial Photograph

Persons Consulted:

Virginia Austerman, Archaeologist
Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Clinton Marr, Retired Architect
Tanya Sorrell, Architectural Historian
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital

Appendix I: **Primary Record & Building, Structure, Object Record**
Riverside Community Hospital - Building L - 4426 Brockton Avenue

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

Trinomal_____
CHR Status Code 6Z

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 10 ***Resource Name or #** (Assigned by recorder.) Riverside Community Hospital - Building L
P1. Other Identifier:
***P2. Location:** ☐**Not for Publication** ☒**Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4426 Brockton Avenue, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 464588 **mN** 3759749
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-060-028
East side of Brockton Avenue, south of 14th Street
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:**☒ Building☐ Structure☐ Object☐ Site☐ District☐ Element of District☐ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) West (front) elevation, February 2013

***P6. Date Constructed/Age & Sources:**
1959, Riverside City Building Permit

☒Historic ☐Preshistoric ☐Both
***P7. Owner and Address:**
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒**Continuation Sheet** ☒**Building, Structure, Object Record** ☐**Archaeological Record** ☐**District Record** ☐ **Linear Feature Record** ☐**Milling Station Record** ☐**Rock Art Record** ☐**Artifact Record** ☐**Photograph Record** ☐**Other (List):**

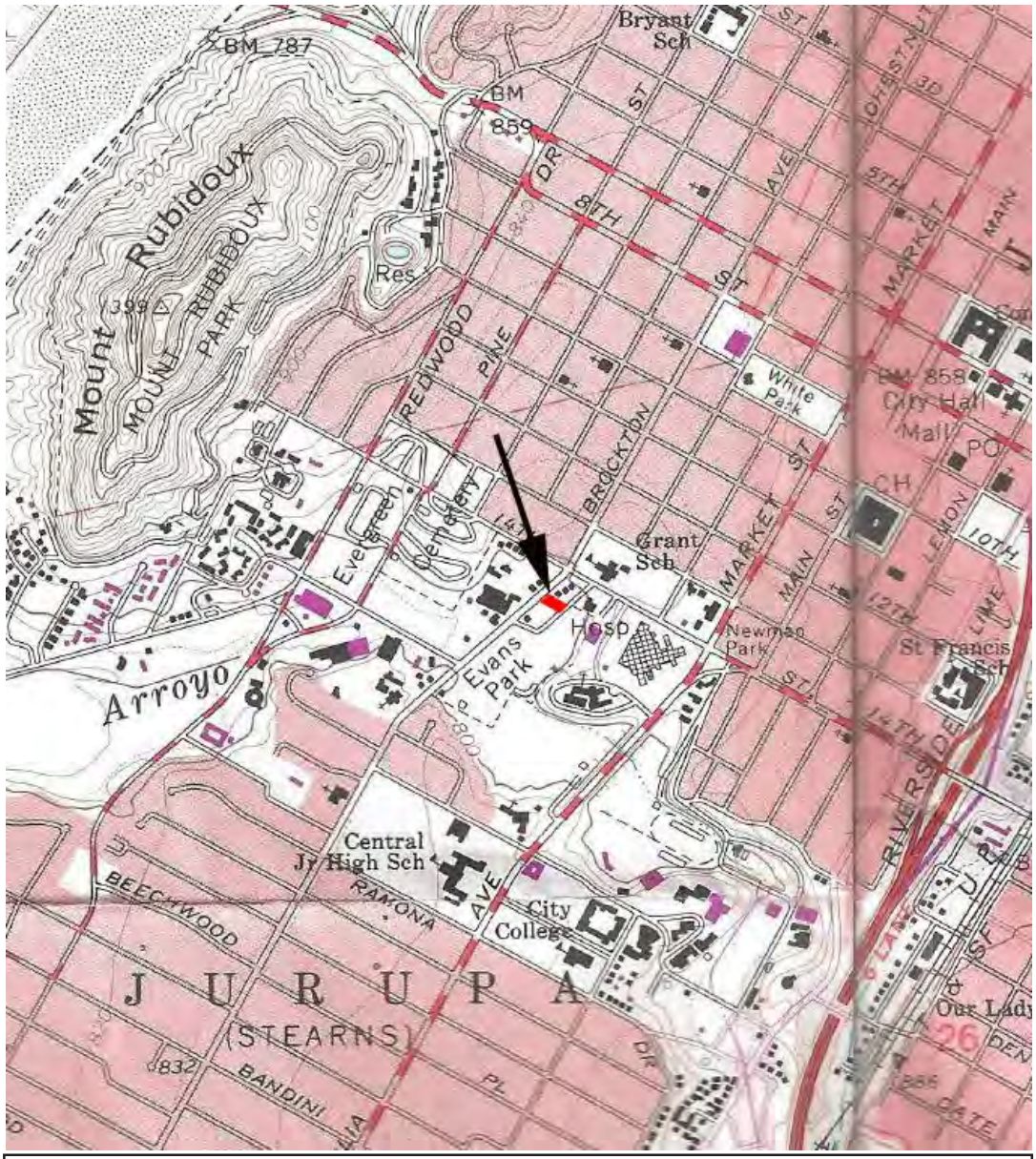
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomal _____

LOCATION MAP

Page 2 **of** 10 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building L

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980



LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

Building L is a generally rectangular concrete block building with a flat roof and unknown type of foundation. All concrete block used in the building is of the “precision” type, having a flat surface with no distinguishing characteristics.

Building L West Elevation: The primary facade of Building L is its west facing elevation. This elevation is characterized by an 8” by 8” square concrete block wall pierced in the middle by clear anodized aluminum framed glass with an opaque coating. Above the storefront and concrete block wall is a stucco finished canopy with a fascia that appears to be 3 to 4 feet high. The fascia has a downward sloping angle of about 10 degrees. At the south end of this building wall is a concrete block wing wall that is the full depth of the fascia.

Building L North Elevation: The north elevation consists of an 8” by 16” concrete block wall, the mass of which is broken only by a metal man-door and metal overhead garage door at the far east end. The canopy that tops the west elevation, wraps around to the north side a short distance (perhaps 20-feet) A wooden fascia board extends the full length of the balance of this building wall.

Building L East Elevation: The east is a plain 8” by 16” concrete block wall capped by a wooden fascia board.

Building L South Elevation: This elevation consists of a plain 8” by 16” concrete block wall capped by the metal flashing that extends over the edge of a short parapet.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Hospital - Building L

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

BLDG L - LOCATION AND ELEVATIONS

TOP LEFT: CURRENT AERIAL PHOTO
TOP RIGHT: EAST ELEVATION
BOTTOM LEFT: NORTH ELEVATION
BOTTOM RIGHT: EAST AND SOUTH ELEVATIONS

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** Riverside Community Hospital - Building L **CHR Status Code:** 6Z
B1. Historic Name:
B2. Common Name: Riverside Community Hospital - Building L
B3. Original Use: Hospital ***B4: Present Use:** Hospital
***B5. Architectural Style:** Vernacular Contemporary Commercial
***B6. Construction History:** (Construction date, alterations, and date of alterations) 1959

***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Unknown **b. Builder:** Unknown
***B10. Significance Theme:** Community Hospital development **Area:** Riverside, CA
Period of significance: 1959 **Property Type:** HP-41 Hospital **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

CONTINUATION SHEET

B10 Significance

a. Historic Context

The area in which Building L is situated, was once a small commercial strip, extending along both sides of Brockton Avenue from Fourteenth Street to Tequesquite Avenue. Around 1908, the area was predominantly residential, however, over time it transitioned into a commercial strip. On the east side of Brockton Avenue in this area, the 1960 city directory lists Kathryn's Shop of Beauty (4408), E.J. Loustaunau residence (4414), State Farm Insurance (4420), P.L. Hunsaker Accounting (4422), Riverside Motor Supply (4426), Royal Laundry (4440), and Brockton Auto Repair (4468). Properties on the west side of the street were a vacant building at 4407, the K.J. Pendergast residence (4413), D.B. Difani Accountant (4421), Elmer Lovins residence (4423), F.A. Watrous Cabinet Maker (4427), Russell Walling Cabinet Shop (4429), Acme /Tiny Tot Laundry (4435), a vacant building at 4443. Ed Martin's Garage (4449), Riverside Laundry & Dry Cleaners (4459), Bud & Harry's Service Station (4481), and Riverside City School Bus System (4489-91). Immediately south of these latter businesses was Riverside's Chinatown which, by that time was a largely unoccupied "ghost town". Today, only remnants of this former business strip remain. Most of the buildings on the west side of the street are vacant, with the notable exception of a Del Taco fast food restaurant at the southwest corner of Brockton Avenue and Fourteenth Street. and the Tri-Cities Laundry further to the south. On the east side of Brockton A venue, other than the hospital owned buildings, only two active commercial/office buildings remain.. These consist of the multi-tenant Community Medical Building and the Brockton Auto Clinic.

Building L is situated on Lot 5 of the B.S. Finch Subdivision, recorded on March 12, 1903. Riverside County Assessor records for 1904 list the owner of Lot 5 as Francisco (Frank) Yslas Loustaunau. Mr Loustaunau also owned Lots 3 and 4. On Lot 4, he built his home. Later, his son, Edward built his home on Lot 3. With the exception of a minor structure with a County Assessor's valuation of $30 to $60 between 1924 and 1930, Lot 5 remained unimproved until 1959 when a commercial building was built there.

Frank Loustaunau was born in 1866 in Mexico. The 1910 Federal Census lists Mr. Loustaunau living at his Brockton Avenue address with his wife Paz, and daughter Stella. The 1920 Federal Census records the addition of Edward J. Loustaunau to the family, who was born in 1914. (California Birth Index) Federal Census records and city directories document that most of the Loustaunau family worked at the Royal Steam Laundry formerly situated immediately south of the subject property and currently the location of the Community Medical Building.

The three Loustaunau properties were transferred to Paz and and her two children in 1934, following the death of Frank. (Riverside County Assessor Rolls) In 1955, Edward J. and his wife Ellen became the owners of the subject property, which was vacant at that time. (Ibid)

B10 Significance

On January 28, 1959, a building permit was issued to Edward Loustaunau for a 4,000 square foot commercial building, valued at $19,000. The permit did not list an architect; however, the contractor was listed as Renne Brothers. A final inspection of the building was completed on April 19, 1959. (Building Permit #33317)

The subject building was occupied by the Riverside Motor Supply auto parts store until ca. 1980, when the city directory shows the building split between Brockton Liquor and Deli at the front and Riverside Motor Machine Shop at the rear. Brockton Liquor and Deli was no longer listed in the city directory of 1991, leaving only Riverside Motor Supply Machine Shop as the building's occupant. The city directory of 1993 reflects the addition of Henry D. Schmitz, PhD as a second tenant in the building. The 1998 1999 city directories list only Dr. Schmitz as the building's tenant. These are the last directories examined by WHS. The building is now used for storage by Riverside Community Hospital.

b. Historic Significance

Building L is a vernacular commercial building, very typical of the 1950s and 1960s. It lacks any architectural significance and is not associated with any persons or events important in history. Therefore it does not qualify for historical designation at any level and has been assigned a CHR Status Code of 6Z.

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1931 Aerial Photograph

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1954 Aerial Photograph
1967 Aerial Photograph

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Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital

Appendix J: **Primary Record & Building, Structure, Object Record**
Community Medical Building - 4440 Brockton Avenue

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

Trinomal_____
CHR Status Code 6Z

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 16 ***Resource Name or #** (Assigned by recorder.) Riverside Community Medical Building
P1. Other Identifier:
***P2. Location:** ☐**Not for Publication** ☒**Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4440 Brockton Avenue, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 464559 **mN** 3759739
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-060-020
East side of Brockton Avenue, south of 14th Street
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:**☒ Building☐ Structure☐ Object☐ Site☐ District☐ Element of District ☐ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) South and West (front) elevations, February 2013

***P6. Date Constructed/Age & Sources:**
1967, Riverside City Building Permit

☒Historic ☐Preshistoric ☐Both
***P7. Owner and Address:**
Unknown Name
1572 Jessamyn Ct
Riverside, CA 92506

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒**Continuation Sheet** ☒**Building, Structure, Object Record** ☐**Archaeological Record** ☐**District Record** ☐ **Linear Feature Record** ☐**Milling Station Record** ☐**Rock Art Record** ☐**Artifact Record** ☐**Photograph Record** ☐**Other (List):**

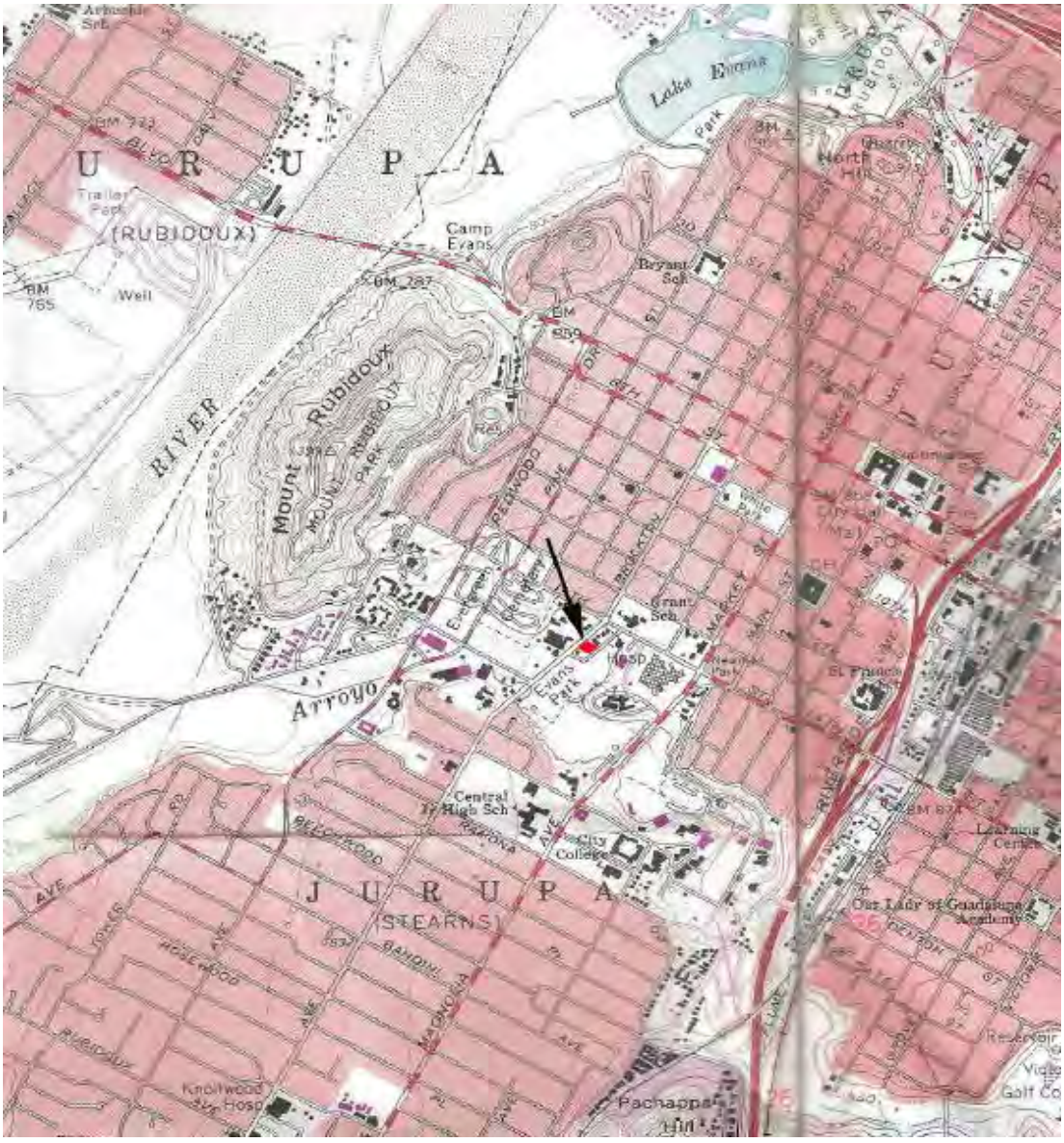
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomial _____

LOCATION MAP

Page 2 **of** 16 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Medical Building

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980



LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

The Community Medical Building is a Mid-Century Modern structure with that is one-story in height and sits atop a subterranean parking structure. The building has "four-sided" architecture, with a generally consistent appearance on all sides. The building has an offset rectangular floor plan and is situated on a raised concrete foundation. Most of the building's walls are constructed of heavily sandblasted 8" by 16" concrete block and the structure's flat roof terminates in wide overhangs equipped with stucco finished soffits and fascias. Situated well inboard from the outer edges of the roof are four stucco finished mechanical equipment screens. Dividing the building into visual segments are concrete block wing walls that are situated at regular intervals along the west, east, and south elevations. All windows are fixed glass held in place by dark brown painted frames that appear to be made of aluminum. The building's windows are dark tinted glass in the upper halves, with painted spandrel panels occupying the lower halves. All of the exterior doors that access doctor's offices are solid wood. A distinctive feature of the building is a raised walkway that extends around the entire perimeter of the building. The walkway forms a plane situated above grade, which is designed to give the building the appearance of floating over the site. Shrubbery at the fringe of the raised walkway, however, obscures this design intention. The walkway is finished with square terra cotta tiles on both the walking surface and the wide faces of the walkway platform. Bordering the walkway is a rectangular tubular steel railing that angles out slightly from the edge of the walkway. The following is an elevation-by-elevation description of the building, focusing on unique characteristics not already covered.

Community Medical Building West Elevation: The west elevation faces Brockton Avenue and includes the building's "front door". Centered on this elevation is a public corridor that extends through the building in an east-west direction. To give this access point visual distinction, the entry is recessed from the overall face of the building and the perimeter roof overhang has a notch that follows the shape of the recess. Access to the inside of the building is provided via dark bronze anodized aluminum framed storefront windows and doors. Open back concrete stairs flanked by rectangular steel tubular railings provide the means for pedestrians to go from the public sidewalk to the entry doors. The wall to the north of the entry is fitted with a sign consisting of bronze pegged-on letters reading "4440 COMMUNITY MEDICAL BUILDING". An identical signs appears next to the entry on the east elevation.

Community Medical Building North Elevation: The north elevation is the least visible of the building's four elevations. Obscuring a clear view to the entire elevation is the Riverside Community Hospital storage building, Building L, which angles into the Community Medical Building's property, creating a "pinch point" midway along the the north property line.

The part of the north elevation visible from Brockton Avenue is a continuation of the west elevation's theme of a roof overhang covered walkway, concrete block walls segmented by windows, and angled metal railing. Toward the mid-point of the north elevation, the building nearly touches a

CONTINUATION SHEET

P3a Description

corner of Building L next door. The walkway in this area is secured by wrought iron fencing, and stairs from this area provide access to the subterranean parking below. A metal patio cover has been added to this area of the building to keep rain water out of the parking area.

The part of the north elevation visible from the rear parking area is rather utilitarian in appearance, its concrete block wall bifurcated with a panel of stucco that is flanked by two windows. This part of the north elevation also lacks the canopy and walkway feature characteristic of the rest of the building. Adding to the utilitarian appearance of this part of the building is a concrete block wall enclosed trash dumpster area guarded by metal gates and the driveway and entry to the subterranean parking.

Community Medical Building East Elevation: The east elevation is essentially a mirror image of the west elevation, except that access to the building is primarily from a ramped driveway that extends up to the building from the north and south, parallel to the building face. Pedestrian stairs are also located at the north and south ends of the walkway.

Community Medical Building South Elevation: The south elevation carries the theme of the west and east elevations around to the south side of the building. Toward the east half of this elevation, the building notches in a northerly direction, essentially mirroring the building extension on the north side of the building. Extending down from Brockton Avenue, a driveway provides access to the subterranean parking. Like the north elevation, the building walls on this side of the building include panels of stucco. Where the building notches toward the north, are concrete stairs that lead to the parking structure below. And, like the north elevation, the area associated with these stairs is protected from rain by a corrugated metal patio cover that is a later addition.

Community Medical Building Site and Landscape Features: The landscaping on the property is largely located on the east and west frontages, with a small amount of landscaping wrapping around to the north elevation and some planters situated outside the subterranean parking on the south side of the building. The most notable landscape feature consists of multiple Lemon Scented Gum Eucalyptus trees that lend a lacy appearance to the building as viewed from a distance. Other planters are planted with lawn, groundcovers, and small shrubs. Hardscape improvements include the driveways to the subterranean parking, the ramped driveway to the east entrance, and a terracotta tile walkway that extends into the Brockton Avenue public sidewalk at the main westerly entry to the building.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

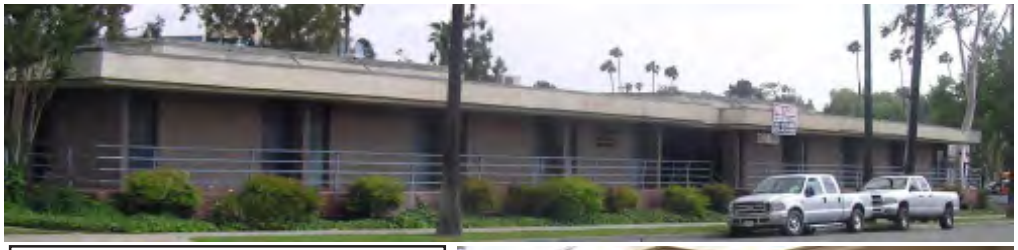
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Medical Building

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description



WEST ELEVATION - COMMUNITY MEDICAL BUILDING

SOUTH ELEVATION - COMMUNITY MEDICAL BUILDING

NORTH ELEVATION - COMMUNITY MEDICAL BUILDING

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

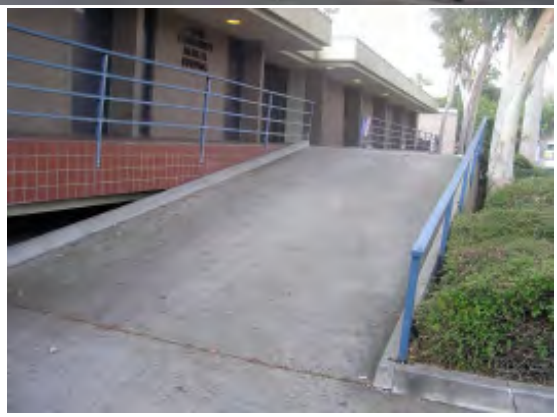
Primary # _____
HRI# _____
Trinomal _____

Page 6 **of** 16 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Medical Building

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

EAST ELEVATION - COMMUNITY MEDICAL BUILDING



SOUTH ELEVATION - COMMUNITY MEDICAL BUILDING

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** Riverside Community Medical Building **CHR Status Code:** 6Z
B1. Historic Name: Riverside Community Medical Building
B2. Common Name: Riverside Community Medical Building
B3. Original Use: Hospital ***B4: Present Use:** Hospital
***B5. Architectural Style:** Vernacular Contemporary Commercial
***B6. Construction History:** (Construction date, alterations, and date of alterations) Completed 1967

***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Unknown **b. Builder:** Unknown
***B10. Significance Theme:** Community Hospital development **Area:** Riverside, CA
Period of significance: 1967 **Property Type:** HP-41 Hospital **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

CONTINUATION SHEET

B10 Significance

a. Historic Context

The area in which Community Medical Building is situated, was once a small commercial strip, extending along both sides of Brockton Avenue from Fourteenth Street to Tequesquite Avenue. Around 1908, the area was predominantly residential, however, over time it transitioned into a commercial strip. On the east side of Brockton Avenue in this area, the 1960 city directory lists Kathryn's Shop of Beauty (4408), E.J. Loustaunau residence (4414), State Farm Insurance (4420), P.L. Hunsaker Accounting (4422), Riverside Motor Supply (4426), Royal Laundry (4440), and Brockton Auto Repair (4468). Properties onn the west side of the street were a vacant building at 4407, the K.J. Pendergast residence (4413), D.B. Difani Accountant (4421), Elmer Lovins residence (4423), F.A. Watrous Cabinet Maker (4427), Russell Walling Cabinet Shop (4429), Acme /Tiny Tot Laundry (4435), a vacant building at 4443. Ed Martin's Garage (4449), Riverside Laundry & Dry Cleaners (4459), Bud & Harry's Service Station (4481), and Riverside City School Bus System (4489-91). Immediately south of these latter businesses was Riverside's Chinatown which, by that time was a largely unoccupied "ghost town". Today, only remnants of this former business strip remain. Most of the buildings on the west side of the street are vacant, with the notable exception of a Del Taco fast food restaurant at the southwest corner of Brockton Avenue and Fourteenth Street. and the Tri-Cities Laundry further to the south. On the east side of Brockton A venue, other than the hospital owned buildings, only two active commercial/office buildings remain.. These consist of the multi-tenant Community Medical Building and the Brockton Auto Clinic.

The Community Medical Building spans Lots 6 through 9 of the B.S. Finch Tract, recorded in 1903.

By 1904, B.S. Finch Tract Lots 6 through 8 were improved with a steam laundry facility known as the Royal Steam Laundry. Lot 9 was improved with a single family residence, owned by Mrs. R.E. Wick at that time. (Riverside County Assessor) Across Brockton Avenue was another steam laundry, the Riverside Steam Laundry. The proximity of this area to Chinatown was likely the reason for the location of two laundries in this area.

The residence appears to remain on Lot 9 through at least 1953 (Riverside City Directory - 1953), however, Assessor records document that in 1929, the residence became the property of the Royal Steam Laundry. As evidenced by Sanborn Fire Insurance Maps, the steam laundry remained on the property through at least 1965. By1963, the residence on Lot 9 had been replaced with the Royal Automatic Car Wash.

On March 16, 1967 a building permit was issued to replace the steam laundry and automatic car wash with a multi-tenant medical office building. The building permit documents the architecture firm as Cowan & Bussey and the contractor as Robinson & Wilson. On December 5, 1967, the building was issued an occupancy permit and tenants began to move in to what became known as the Community Medical

B10 Significance

Building. The 1968 city directory lists 11 physicians and one pharmacy in the new building. Assessor records document the new owner of the building as Harry B. Frey et. al.

As noted above, the Community Medical Building was designed by the architectural firm of Cowan & Bussey. The principals of this firm were William Lawrence Cowan and Noble R. Bussey.

William Lawrence Cowan: According to the 1930 Federal Census, William L. Cowan was born in Tennessee c. 1923. At that time, the 7-year-old Cowan was living in Perris, California with his 36-year-old father Granville, his 34-year-old mother Nellie, and his two sisters. His father was employed as a laborer on a citrus ranch. By 1940, the Federal Census documents that the family had moved to Riverside, where William lived with his mother, father and their growing family of three girls and two boys in a home on Denton Street. William's father was still employed as a ranch laborer and his mother had found work as a laundress.

Cowan's 1954 application for membership in the American Institute of Architects provides considerable documentation of his background. At the time of the application, he was living in Monrovia. The application notes that he graduated from Riverside Poly High School in 1940. Following his high school graduation, he spent a year at Riverside College, followed by a year and a half at the University of Redlands. In 1942, he enlisted in the Navy, graduating from North Western University Midshipman's School in 1944 and the Advanced Line Officers School of Florida in 1945. In 1952, he graduated from the University of Southern California School of Architecture with a Bachelor of Arts Degree. His Naval service took him to Hawaii, the Philippines, and the South Pacific Islands. He served as a Naval Lieutenant from 1943 to 1945. (http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/ahd1009056.aspx, Accessed 2013)

After leaving the Navy, Cowan worked for Riverside architects G. Stanley Wilson from 1946 to 1947 and Herman Ruhnau from 1947 to 1948. From 1948 to 1949 he worked for architect William Reed of Bell California, and from 1948 to 1949 he worked for D.S. Reynolds, a Los Angeles engineering company. After graduating from USC, he practiced architecture as an employee of G.W. Galloway Co. Engineers of South Pasadena from 1952 to 1954. (Ibid)

The 1956 AIA Directory lists Mr. Cowan with an office in Arcadia, California working under the business name of William L. Cowan and Associates, Architect. At that time he was not affiliated with Noble Bussey. Principal works listed in this directory are: Special Fuels Installation (Edwards Air Force Base, 1954) and a Cleaning Plant (Riverside, 1949). (http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/1956%20American%20Architects%20Directory.aspx, Accessed 2013)

Noble R. Bussey: The 1940 Federal Census documents Noble Bussey as a native of Missouri, born c. 1928. In 1940, the 12-year-old Bussey was living with his parents William R. Bussey and Nora M. Bussey

B10 Significance

on Fourth Street in Riverside. Also in the home with Noble were two brothers. Under employment, the 1940 Federal Census form entry says "State Relief Adm".

WHS found no documentation of Noble Bussey as a member of the AIA, so information on his education and work experience is much more limited than that for William Cowan. The 1947 Riverside city directory lists Noble as a draftsman working for Riverside architect G.Stanley Wilson. In 1953, Mr. Bussey was listed in the Richmond, California directory as a draftsman. By 1955, the Riverside city directory documents that Mr. Bussey was back in Riverside, again working as a draftsman.

Cowan & Bussey, Architects: The 1962 AIA Directory lists Mr. Cowan as a principal of the firm Cowan & Bussey in Riverside, California. This directory documents that the firm was formed in 1959, but a later AIA directory notes the founding year of the firm as 1957. Principal works listed in the 1962 directory are: the Caravan Inn (Riverside, 1958), a Riverside County Flood Control Office Building (Riverside, 1960), Church of Christ (Riverside, 1960), Bourns Industrial Plant (Riverside, 1961). (http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/1962%20American%20Architects%20Directory.aspx, Accessed 2013)

The 1970 AIA Directory documents a new address for the firm of Cowan & Bussey in San Bernardino, California. Principal works listed are: Bourns Electrical Plant (Riverside, 1963), Castle View Elementary School (Riverside, 1966), Master Plan for California Baptist College (Riverside, 1968), California Baptist College Dormitories (Riverside, 1968), Central Plaza Office Tower (Riverside, 1969), Riverside City College Biological Science Building (Riverside, 1968). The directory also notes that the firm earned the 1963 Top Ten Plant Award from *McGraw Hill Factory Magazine* for the firm's design of the Bourns Electronic Plant. (http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/1970%20American%20Architects%20Directory.aspx, Accessed 2013)

In June of 2012, Jennifer Mermilliod of J.M. Research and Consulting completed a Cultural Resources Survey for the California Baptist University Specific Plan. In her report, Ms. Mermilliod identified several Bussy & Cowan designed buildings as follows:

- Lancer Arms, Buildings 1 and 2 (1964-5)
- Smith and Simmons Halls, Two Story Addition (1968)
- Van Dyne Field House (1968)
- Knights of Pythias Hall (now the CBU Bourns Laboratories) (1966)

(JM Research & Consulting 2012)

Ms. Mermilliod's research led to the July 1967 issue of *Architectural Digest* which features Mr. Cowan's residence at 4269 Miramonte Drive in Riverside. The Post and Beam style Modern residence is lauded in

the magazine for its sensitivity to the natural features of the site and its overall design excellence. (Little 1967: 42-47)

b. Historic Significance

WHS has determined that the Community Medical Building does not qualify for historic designation at any level, and has accordingly assigned it a CHR Status Code of 6Z. (Found ineligible for NR, CR, or Local designation through survey evaluation.) Other than its architect, it is not associated with persons important in history and there is no evidence it is associated with events important in history. Further, its architecture does not rise to the level of a significant example of Modern Architecture.

The Cowan & Bussey architectural firm did a considerable amount of work in Riverside, some of it very distinctive. As local Riverside architects go, however, the portfolio of Cowan & Bussey's work lacks the overall design creativity of other Riverside architects such as Clinton Marr and Herman Ruhnau. Nonetheless, the firm is important in the realm of Riverside architects and some of their works are worthy of cultural resource status. Remarkable buildings designed by Cowan & Bussey include the Church of Christ (6160 Riverside Avenue, 1960), the Magnolia Professional Building (6770 Magnolia Avenue, 1965), and the Cowan Residence (4269 Miramonte Drive, 1965).

The Community Medical Building has Miesian influences, but it fails to present a unified or distinctive theme. Ludwig Mies van der Rohe (1886 – 1969) was a German-American architect and leader of the Modern movement. His buildings were known for a minimal framework of structural order balanced against free-flowing open spaces. He called his buildings "skin and bones" architecture. Many of his buildings appeared to be floating over their sites, a concept employed in the Community Medical Building.

The Community Medical Building has a number of shortcomings that detract from its architectural significance. Among them are:

- The lack of a distinct entry point from Brockton Avenue, which tends to give the Brockton Avenue frontage a rather weak, unfocused look.
- The thickness of the face of the perimeter walkway, which gives the building a bottom heavy appearance.
- The thickness of the roof fascia, which tends to "push down on the building".
- The use of square terracotta tile on the face of the perimeter walkway which tends to conflict with the linearity of the building.
- The raised vehicular ramp at the back of the building which essentially destroys any sense of design continuity on that side.

CONTINUATION SHEET

B10 Significance

- The very shallow angle of the perimeter walkway railing which is not sufficient to provide the kind of drama this important design feature should have.

Overall, the building lacks a sense of design focus and it does not have the delicate linearity characteristic of better buildings that employ some of its main design themes. The iconic Farnsworth house (Plano, Illinois, 1951) is an example of the ideal toward which buildings of this type should strive. Within Riverside, the Standard Insurance Building (3380 14th Street, 1961) and the Downtown Riverside Branch Library (3581 Mission Inn Avenue, 1963) are better examples of “floating” buildings.

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Accessed 2013 http://communities.aia.org/sites/hdoaa/wiki/Wiki%20Pages/1970%20American%20Architects%20Directory.aspx

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Maps and Aerial Photographs

Fairchild
1931 Aerial Photograph

CONTINUATION SHEET

B12 References

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1963 Aerial Photograph

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1942 Riverside, California
1953 Riverside, California
1967 Riverside West, California (Photorevised 1980)

United States Department of Agriculture
1938 Aerial Photograph
1948 Aerial Photograph
1954 Aerial Photograph
1967 Aerial Photograph

Persons Consulted:

Virginia Austerman, Archaeologist
Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Clinton Marr, Retired Architect
Tanya Sorrell, Architectural Historian
Matt Byrum, Perkins + Will Architects

Appendix K: **Primary Record & Building, Structure, Object Record**
Brockton Auto Clinic - 4468 Brockton Avenue

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

Trinomal_____
CHR Status Code 6Z

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 12 ***Resource Name or #** (Assigned by recorder.) Brockton Auto Clinic
P1. Other Identifier:
***P2. Location:** ☐**Not for Publication** ☒**Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4468 Brockton Ave, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 464529 **mN** 3759698
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-060-009
East side of Brockton Avenue, south of 14th Street
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:**☒ Building☐ Structure☐ Object☐ Site☐ District☐ Element of District☐ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) North and west (front) elevations, February 2013

***P6. Date Constructed/Age & Sources:**
1940, Riverside City Building Permit

☒Historic ☐Preshistoric ☐Both
***P7. Owner and Address:**
Brockton Auto Clinic c/o Norris A Waters Jr.
4468 Brockton Avenue
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒**Continuation Sheet** ☒**Building, Structure, Object Record** ☐**Archaeological Record** ☐**District Record** ☐ **Linear Feature Record** ☐**Milling Station Record** ☐**Rock Art Record** ☐**Artifact Record** ☐**Photograph Record** ☐**Other (List):**

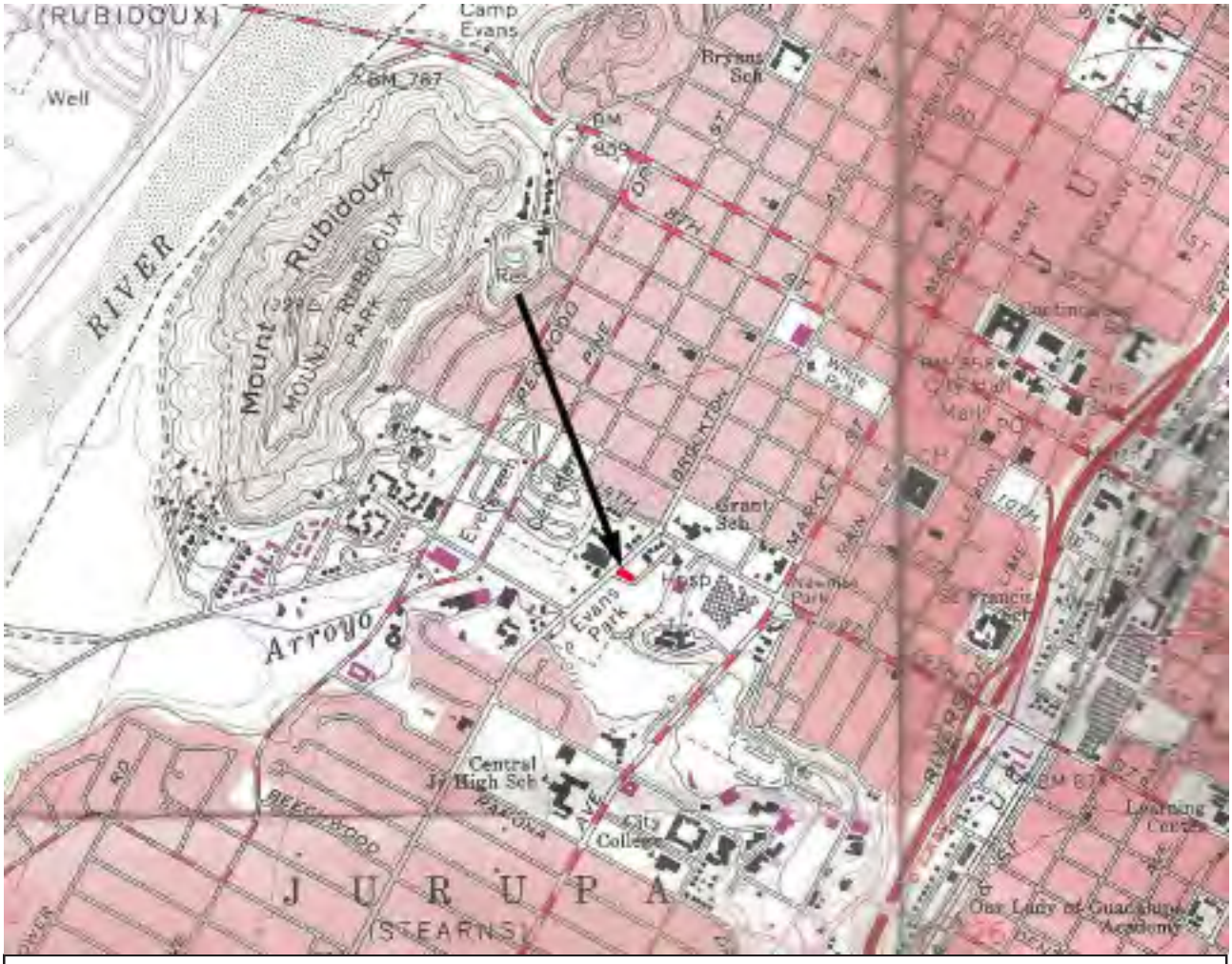
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomal _____

LOCATION MAP

Page 2 **of** 12 ***Resource Name or #** **(Assigned by recorder)** Brockton Auto Clinic

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980



LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

The Brockton Auto Clinic is a Western False Front style rectangular stucco over wood frame building with a corrugated metal gabled roof and concrete slab foundation. The front gable of the building is situated behind a western false front, whereas the rear gable is open to view. Business signs composed of contemporary individual plastic faced letters are situated on the west, north, and south elevations.

Brockton Auto Clinic West Elevation: The building's west elevation presents its Western False Front to Brockton Avenue. Situated toward the north end of the elevation is a corrugated metal overhead door integrated with a matching man-door. Immediately south of the overhead door is a fixed glass, wood framed window guarded by wrought iron that incorporates an ivy theme. At the far south end of the west elevation is a contemporary six-panel metal clad entry door guarded by a contemporary security screen door. Business signs are situated toward the top of this building wall.

Brockton Auto Clinic North Elevation: The north elevation is a plain stucco finished wall with a business sign situated toward the west end near the top of the wall. The building's corrugated metal gabled roof is visible in relation to this elevation.

Brockton Auto Clinic East Elevation: The east elevation is a plain stucco finished wall penetrated by a metal roll-up door. Projecting easterly from the area just below the gable end is a metal patio cover. The top of the gable end has a metal louvered attic vent.

Brockton Auto Clinic South Elevation: The south elevation is essentially a mirror image of the north elevation except it has a small projection at its east end.

Brockton Auto Clinic Site and Landscape Features: The site is entirely paved. An outdoor lift is situated south of the building, and a large metal shipping container is situated just east if this lift. Several outdoor lifts are located behind the building.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

Page 4 **of** 12 ***Resource Name or #** **(Assigned by recorder)** Brockton Auto Clinic

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

ELEVATIONS - BROCKTON AUTO CLINIC

TOP RIGHT: SITE IMPROVEMENTS
TOP LEFT: WEST & NORTH ELEVATIONS
BOTTOM LEFT: SOUTH ELEVATION
BOTTOM RIGHT: EAST ELEVATION

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** Brockton Auto Cllinic **CHR Status Code:** 6Z
B1. Historic Name:
B2. Common Name: Brockton Auto Clinic
B3. Original Use: Auto Repair Shop ***B4: Present Use:** Auto Repair Shop
***B5. Architectural Style:** Western False Front Commercial
***B6. Construction History:** (Construction date, alterations, and date of alterations) Completed 1940

***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Unknown **b. Builder:** Unknown
***B10. Significance Theme:** Pre-World War II Commercial Uses **Area:** Riverside, CA
Period of significance: 1940 **Property Type:** HP-6 1-3 Story Commercial **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

CONTINUATION SHEET

B10 Significance

a. Historic Context

The area in which the Brockton Auto Cliniic is situated, was once a small commercial strip, extending along both sides of Brockton Avenue from Fourteenth Street to Tequesquite Avenue. Around 1908, the area was predominantly residential, however, over time it transitioned into a commercial strip. On the east side of Brockton Avenue in this area, the 1960 city directory lists Kathryn's Shop of Beauty (4408), E.J. Loustaunau residence (4414), State Farm Insurance (4420), P.L. Hunsaker Accounting (4422), Riverside Motor Supply (4426), Royal Laundry (4440), and Brockton Auto Repair (4468). Properties onn the west side of the street were a vacant building at 4407, the K.J. Pendergast residence (4413), D.B. Difani Accountant (4421), Elmer Lovins residence (4423), F.A. Watrous Cabinet Maker (4427), Russell Walling Cabinet Shop (4429), Acme /Tiny Tot Laundry (4435), a vacant building at 4443. Ed Martin's Garage (4449), Riverside Laundry & Dry Cleaners (4459), Bud & Harry's Service Station (4481), and Riverside City School Bus System (4489-91). Immediately south of these latter businesses was Riverside's Chinatown which, by that time was a largely unoccupied "ghost town". Today, only remnants of this former business strip remain. Most of the buildings on the west side of the street are vacant, with the notable exception of a Del Taco fast food restaurant at the southwest corner of Brockton Avenue and Fourteenth Street. and the Tri-Cities Laundry further to the south. On the east side of Brockton A venue, other than the hospital owned buildings, only two active commercial/office buildings remain.. These consist of the multi-tenant Community Medical Building and the Brockton Auto Clinic.

The Brockton Auto Clinic is situated on Lot 10 of the B.S. Finch Subdivision, recorded on March 12, 1903.

Riverside County Assessor records for 1904 list the owner of Lot 10 as Lois A. Burdick. Assessor records show no valuation for structures for 1904, 1905, and 1906. In 1907, a structure valued at $75 is documented on Lot 10. The nature of this structure is not noted, however, it was likely a very simple residence. This reasoning is based on the fact that in 1910, when the Assessor rolls carried the same value, the Federal Census listed the property as the location of a residence. The 1908 Sanborn Fire Insurance map gives further documentation to the improvement of Lot 10 with a residence. Assessor records document that the residence remained on this property through c. 1939.

The 1900 Federal Census lists Mrs. Burdick as 42-years-old and living with her husband Joseph and five children on Howard Avenue in Riverside. This census notes her birth place as Wisconsin and her birth year as c. 1858. Her husband was documented to be a house carpenter and she was not employed outside of their home. In 1905, the city directory lists Lois living on Seventh Street in Riverside, where her occupation is noted as that of a dress maker. Her husband is not listed in that directory. The 1910 Federal Census documents Mrs. Burdick as servant living in Pasadena.

CONTINUATION SHEET

B10 Significance

From 1908 through 1939, Assessor records list the property under the ownership of various members of the Crawford family. Ida E. Crawford owned the property in 1908 and 1909. WHS found Ida in the 1880 Federal Census, which documents her as a native of Indiana, born c. 1862. At that time, she was an 18-year-old student, living with her parents and her five siblings in Indiana's Sullivan County. In 1911, her brother William Webster Crawford assumed ownership of the property and remained its owner through 1932. William was born in Indiana c. 1863 and worked as a wallpaper hanger while a resident of the Brockton Avenue residence. The 1910 Federal Census, records Mr. Crawford as the head of the household, living at the Brockton Avenue residence with his wife Jennie and their two children. William Crawford died in 1930 and his wife died in 1931. (www.ancestry.com, Accessed 2013) In 1933, the property passed to William's son William W. Crawford Jr., born in California in 1909. At that point, the assessed value of the property dropped from $120 to $40, a change likely reflecting some damage to the property. As of 1930, William Jr. was living in Glendale, California with his wife Winifred and working as a newspaper press man. William Jr. died in Hemet in 1991. (California Death Index) In 1939, the Assessor's records indicate no value for structures, so the residence was no longer on the property when it was assess for that year.

For the single year of 1940, Assessor records list Floyd Jackson Cockerham as the owner of the property. Born in North Carolina in 1894, Mr. Cockerham owned a roofing company in Riverside. His Night Ball team, the Cockerham Roofers, was among the local baseball teams playing in the adjacent Evans Athletic Park. (WHS 2013) The 1939 city directory lists Mr. Cockerham living at a residence on Seventh Street in Riverside with his wife Vergie. Mr. Cockerham died in Riverside in 1971. (California Death Index)

Building Permit records document that a permit for a "Stucco Repair Garage" was issued for the subject property on December 4, 1939. Listed as owners/builders were "Smith & Patterson" (sic) On January 16, 1940, the City issued an occupancy permit for the completed structure. (Building Permit # 21529) This building permit represents the beginning of the history of the auto repair garage on the subject property.

Corresponding to the above building permit, County Assessor records document the owners of the subject property as Arthur Smith and Albert W. Pattison. The valuation for the repair garage was $370. WHS found no significant permits for the subject property subsequent to the issuance of the original building permit. In 1962 , however, Arthur Smith secured a building Permit to "Close garage door." (Building Permit 2249) and in 2011, Clinton Randolph took out a permit to upgrade the building's electrical service. (Building Permit 11-0356)

As noted earlier, the area in which the subject building is situated was once a small commercial strip, extending along both sides of Brockton Avenue from Fourteenth Street to Tequesquite Avenue. From 1940 through the present, the subject property was occupied by various uses, most notably auto repair businesses.

B10 Significance

Today, only remnants of the former Brockton Avenue business strip remain. Most of the buildings on the west side of the street are vacant, with the notable exception of a Del Taco fast food restaurant at the southwest corner of Brockton Avenue and Fourteenth Street. Other than the hospital owned buildings, only two active commercial/office buildings remain on the east side of Brockton Avenue between Fourteenth Street and Tequesquite Avenue. These consist of the multi-tennant Community Medical Building to the north of the subject property and the Brockton Auto Clinic which occupies the building on the subject property.

The Brockton Auto Clinic building has been occupied by at least four different types of businesses since it was completed in 1940. The first business was Smith & Pattison Auto Repair. The principals in this business were John Arthur Smith and Albert William Pattison.

According to the 1930 Federal Census, Arthur Smith was born in Tennessee, in 1889. It appears he had children late in life, as the 1930 Federal Census lists only Arthur and his wife Vivian living in his household on Locust Street in Riverside. By 1940, Mr. Smith was living at the same address, but his family included his wife and two children. Both censuses list Arthur's occupation as that of an auto mechanic. Arthur died in December of 1968. (Social Security Death Index)

Albert Pattison was born in Michigan in 1878. He was married to Mabel Pattison and had two children. (www.ancestry.com, Accessed 2013) The earliest Federal Census record showing Pattison living in California is the 1930 Census, which shows him living on the same street as his partner and living with his wife and two lodgers. By 1940, he had moved to Orange Vista Way and was living with his wife only. (1940 Federal Census) Mr. Pattison died in May of 1973. (Social Security Death Index)

By 1963, a new business, Domestic Appliance Service, occupied the subject building. The listed owner of the property was Arthur Smith et. al. (Riverside County Assessor) The 1966 criss-cross directory lists another new business at the Brockton Avenue location, Magic Carpet Rug Service. In 1968, the criss-cross directory lists Steve's Lawn Mower Service in the building. The exact beginning and ending dates of these leases are unknown, as there are gaps in available criss-cross directories at the Local History Resource Center of the Riverside Public Library. However, criss-cross directories are available for every year from 1968 through 1974, and all of these directories list Steve's Lawn Mower Service as the occupant. In 1975, the business changed to Brockton Auto Clinic, a name that has remained with the building through the present day. WHS did not secure ownership data beyond 1970, so it is unknown when the property's ownership may have changed after that year.

b. Historic Significance

The Brockton Auto Clinic is a vernacular Western False Front commercial building, very typical of the 1900s through 1940s. It lacks any architectural significance and is not associated with any persons or

CONTINUATION SHEET

B10 Significance

events important in history. There are many other examples of this sort of commercial building throughout Riverside, particularly in the North Main Street area between First Street and the 60 Freeway. The Brockton Auto Clinic building, therefore, does not qualify for historical designation at any level and has been assigned a CHR Status Code of 6Z. (Found ineligible for NR, CR, or Local designation through survey evaluation.)

B12 References

Books, Periodicals, and Web Sites

Ancestry.Com
Accessed 2013 California Death Index
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1998 *Riverside's History From its First People to the Present.* Riverside Museum Press, Riverside, California

Elliott, Wallace W.
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1912 *A History of Riverside County.* Historic Record Company, Los Angeles, California

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Riverside City Information Technology Department
Accessed 2009 GIS System

Riverside City Planning Department
2003 *Westside Update/Reconnaissance Surveys,* Prepared for the City of Riverside by Myra L. Frank & Associates, Inc, Los Angeles, CA
Accessed 2013 www.riversideca.gov, Cultural Resources Database
Accessed 2013 www.riversideca.gov, Building Permit Records

Wilkman Historical Services
2009 *Draft Cultural Resources Impacts Evaluation of Riverside Community Hospital Bed Tower Replacement and Cultural Resources Survey and Evaluation of Original Hospital Building and Calvary Presbyterian Church,* Riverside, California
2013 *Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Cultural Resources Impacts Report,* Riverside, California
2013 Oral History Interview with Clinton Marr, 5-10-2013

Maps and Aerial Photographs

Fairchild
1931 Aerial Photograph

Riverside County Flood Control and Water Conservation District
1963 Aerial Photograph

United States Geological Survey
1901 Riverside, California
1942 Riverside, California
1953 Riverside, California
1967 Riverside West, California (Photorevised 1980)

United States Department of Agriculture

CONTINUATION SHEET

B12 References

1938 Aerial Photograph
1948 Aerial Photograph
1954 Aerial Photograph
1967 Aerial Photograph

Persons Consulted:

Virginia Austerman, Archaeologist
Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Tanya Sorrell, Architectural Historian
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital

Appendix L: **Primary Record & Building, Structure, Object Record**
Calvary Presbyterian Church - 4495 Magnolia Avenue

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

Trinomal_____
CHR Status Code 3S

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 22 ***Resource Name or #** (Assigned by recorder.) Calvary Presbyterian Church
P1. Other Identifier:
***P2. Location:** ☐**Not for Publication** ☒ **Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4495 Magnolia Avenue, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 464682 **mN** 3759523
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate.) APN 217-080-015
West side of Magnolia Avenue, south of 14th Street
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:**☒ Building☐ Structure☐ Object☐ Site☐ District☐ Element of District☐ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) East (front) elevation, February 2009

***P6. Date Constructed/Age & Sources:**
1935, Riverside City Building Permit

☒Historic ☐Preshistoric ☐Both
***P7. Owner and Address:**
Calvary Presbyterian Church
4495 Magnolia Avenue
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒**Continuation Sheet** ☒**Building, Structure, Object Record** ☐ **Archaeological Record** ☐ **District Record** ☐ **Linear Feature Record** ☐ **Milling Station Record** ☐ **Rock Art Record** ☐**Artifact Record** ☐**Photograph Record** ☐**Other (List):**

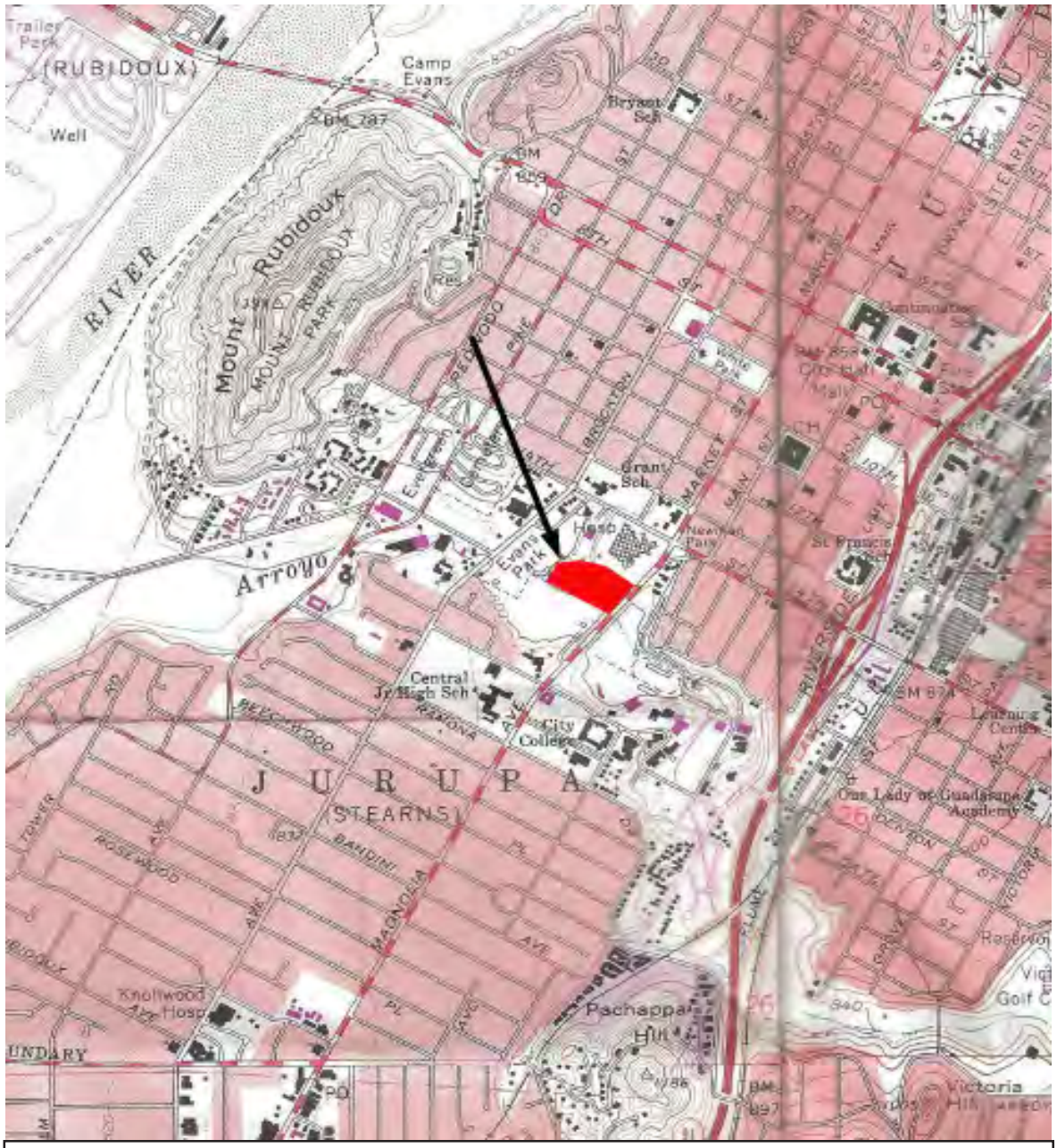
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomial _____

LOCATION MAP

 ***Resource Name or #** **(Assigned by recorder)** 4495 Magnolia Ave, Riverside, CA

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980



LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

Calvary Presbyterial Church is a complex campus built over several decades. All but the Christian Education building are designed in the Gothic Revival style more commonly found in East Coast cities, in England, and in Europe. It stands alone in Riverside as the only example of a large-scale Gothic Revival building.

The Fellowship Hall, Sanctuary, and Office wings are all constructed of board formed reinforced concrete. The older classroom wing (Westminster Hall) and the Christian Education building are built of conventional stud wall construction with smooth plaster finish. All buildings have generally rectangular floor plans, with occasional notches and extensions breaking some the predominantly rectangular patterns. Original openable windows in the older parts of the church are mostly wood framed casement types, while those of the later built Sanctuary building are metal framed casement windows. The mostly gabled roofs of the older buildings are all covered in red clay barrel tiles. A detailed description of the church's architecture is keyed the site plan in

Sanctuary: The Sanctuary has a main floor and basement element. The basement was completed in 1941, whereas the upper part of the building was completed in 1956. The main entrance to the Sanctuary is via the east elevation. This elevation features a recessed central pointed arch splayed portal with a pair of wooden square-panelled doors. Dividing the doors is a concrete column on a high pedestal. The shaft of the column has an "X" motif topped by a crocketed capital and a statue of Jesus Christ. Access to this entry is via a concrete staircase with concrete sides and iron railings. Framing the portal are buttresses with gable-shaped weathings and vertical rectangular extensions having sloped caps. Crowning the portal is a solid balustrade featuring a foliate frieze divided by vertical subsets. Above the portal a massive rose window sits atop pointed arch stained glass windows in a recessed pointed arch frame with molded archi-volt. The outer walls of the east elevation step back on both sides of the gabled entry to create notches that are partially filled by vertical elements capped in copper roofing and punctuated by one pointed arch stained glass windows each.

On the right side of the east elevation is a prominent square, three-tier concrete bell tower with bevelled corners. Set within the upper tier on all four sides of the bell tower are rectangular double louvers. Above the louvered panels the cast concrete upper walls feature decorative fins. The north side of the tower features a pointed arch stained glass window. A multifaceted copper spire extends above the northeasterly most corner of the tower, situated on a multifaceted concrete base. It is punctuated by louvered panels and topped by a cross.

The north elevation of the Sanctuary faces a brick paved courtyard onto which also face the church offices and the south side of the Fellowship Hall. The courtyard is shaded by mature trees. Behind the bell tower on this side of the Sanctuary is a side entry with gabled roof covering. The original plans show this side entry as the southerly termination of a cloister linking the Fellowship Hall to the Sanctuary. This cloister is

CONTINUATION SHEET

P3a Description

visible in the rendering of the church but it was never built. The open sides of the porch feature an arcade of pointed arches resting on columns with modified Corinthian capitals and iron railings. On the inner porch area, the arcade repeats itself as a blind arch. Providing access to the Sanctuary via the bell tower is a set of double wooden square-panelled doors. The main portion of the north elevation is divided into three bays by buttresses with weatherings through each bay. Punctuating each bay is a pointed arch stained glass window. In a recessed area, the basement wall of this elevation guarded by an iron balustrade. Diaphragm arches divide each of the bays. Punctuating the basement wall are rectangular windows and doors.

The south elevation faces a large paved parking lot, formerly planted with a grove of trees during the first several years of the church's existence on this property. The original basement level is visible at the lower part of this elevation, punctuated by metal framed casement windows. The portion of this elevation east of a porte cochere is divided into four bays by buttresses with gable tops at the weatherings. Above the gable tops, the buttresses step back toward the building wall with each step topped by a sloping cap. The most easterly bay is punctuated by two small pointed arch stained glass windows, while each of the other bays east of the porte cochere has a large single pointed arch stained glass window.

Toward the westerly end of the south elevation is a cross gable at the base of which is a porte cochere with a low arched portal that can be closed off with decorative wrought iron gates. The upper area of the porte cochere serves as a transept wing with two pointed arch stained glass windows each penetrating the east and west walls of the transept. The south gable end of the porte cochere/transept is flanked by a pair of buttresses each with two steps topped by sloping caps. Between the buttresses, in the upper area, is a pair of pointed arch stained glass windows. Penetrating the lower porte cochere area of this south wall is a pair of pointed arch openings between which is a diamond shaped opening. The south elevation Sanctuary wall within the porte cochere is broken by a pair of pointed arches recessed into the concrete. The right-most arch contains a pair of wood and glass square paneled doors. The left arch appears to previously have been equipped with an identical set of doors, however they have been closed off with a wainscot panel below the glass panels. The balance of the south elevation west of the porte cochere contains an additional bay flanked on the right by an oriel and on the left by a stepped buttress similar in design to those on the easterly end of the south elevation. In the lower part of this wall is a set of louvered vents capped by a sloping concrete shed roof above which is a pointed arch stained glass window. The three-sided oriel has a stepped molded base and is flanked on the left with what appears to be a concrete ventilation stack or chimney. Below the oriel is a pointed arch topped window.

The west elevation of the Sanctuary is dominated by the Sanctuary's faceted apse centered on this elevation's gable end. Flanking the apse on the right and left are buttresses having two steps topped by sloping caps. The upper part of the apse is dominated by pointed arch stained glass windows, with the center most pair of windows capped by a diamond shaped stained glass window. The basement level of the apse is penetrated by arch topped metal casement windows. To the right of the apse the gable end wall is exposed, revealing a stepped buttress on the right and an arch topped window and rectangular louvered

P3a Description

vent. On the left of the apse is an extension of the basement, with arch topped door opening and above and to the left of which is a rectangular window penetrating the ground floor level of this extension. A concrete retaining wall forward of this basement element supports the rear courtyard area. Flanking the rear courtyard area on the south is the balance of the north elevation of the Sanctuary. This complex elevation includes the north side of the extension mentioned above, penetrated by a single square panelled wooden door above which is a copper porch roof. To the left is a faceted extension with a copper roof and single pointed arch stained glass window. To the left of the faceted extension is a shed roofed area capped by a red clay tiles. The westerly end of the main building wall is terminated in a stepped buttress similar to those elsewhere on the building.

Office Wing: Bridging the Sanctuary on the south to the Fellowship Hall on the north is a two-story wing with offices and meeting rooms. The easterly elevation of this wing faces onto the front courtyard area. This elevation features an open cloister of pointed arches supported by columns with crocketed capitals. A diaphragm arch is situated at each end. The east elevation of the offices wing has wood framed casement windows. Most of the doors are paneled wood. Above the cloister is a walkway covered by a shed extension to the pitched roof over upper floor. The covered walkway of the upper floor is supported by simple wooden columns. The exposed rafters of the shed roof have decoratively cut ends. Providing access to the upper floor offices is an intricate concrete staircase element. The staircase element is topped by a double gabled roof. The westerly most gable contains a decorative attic vent made up of clay pipes arranged in the shape of a cross. The easterly most gable has south and north facing pointed top arched openings, supported at the corner by a square column with bevelled edges and a crocketed capital with cross motif. A rectangular window penetrates the wall north of the easterly arched opening.

The west elevation of the office includes two elements. To the south is the west facing wall of the two floor office wing. This elevation includes two dormer style windows on the upper floor and a stepped chimney with brick cap. The lower floor is penetrated by square windows. The upper floor windows are shaded by aluminum awnings. All of the windows in this west-facing building wall have been replaced with modern aluminum framed double glazed windows with dark anodized frames and mullions. To the north of this office element is a gabled extension that encloses a two-story meeting space. The lower floor of this meeting space has a faceted extension dominated by large wood framed windows and roofed with flat red clay tiles. Penetrating this roof is a large electric aluminum roof vent. Access to the meeting space is via wood and glass doors on the north and south sides. The windows in this upper floor area are modern double glazed types similar to the windows in the west elevation of the offices.

The offices wing terminates into the Fellowship Hall's cloister and southerly roof pitch. This element bridges over a covered passage way that connects the front courtyard to the rear courtyard.

Fellowship Hall: The Fellowship Hall was among the first buildings constructed on the site and originally served as the church's Sanctuary. Its south elevation faces onto the front courtyard and is dominated by a

P3a Description

cloister penetrated by pointed top arches that are supported by integral concrete columns flanked by half columns with crocketed capitals. Providing natural light through the south elevation wall is a series of rectangular wood framed windows. Toward the east end of the south elevation are two large round vents with clay roof tile grilles. Below these grilles is a pointed arch recess with a single square paneled wood door accessing the Fellowship Hall. At the opposite end of the courtyard facing cloister is a pair of square paneled wood doors that also access the Fellowship Hall. West of these wood doors is a large panel of glass through which one can see the kitchen.

The east elevation of the Fellowship Hall features a three bay open arcade with pointed arches supported by splayed piers and simple imposts. The splayed archivolt is framed by an intricate surround with a rope, dentil, and angel motif molded into the concrete. Projecting from the concrete gable end above the archivolt are four statues of the evangelists. Each statue is situated on a pedestal featuring the molded symbol of the respective evangelist. From left to right, these are: an angel for Matthew, a lion for Mark, an ox for Luke, and an eagle for John. Centered above the statues is a circular medallion with a rosette frame surrounding the Lamb of God with the Flag of Calvary. The cornice of the gable end features a row of dentils, interspersed with foliate scroll consoles having a cross motif. At the lower left corner of this elevation is a cornerstone inscribed “Jesus Christ Himself the Chief Cornerstone.” Centered on this elevation is a pair of square paneled wooden doors with a simple surround molded into the concrete.

The north elevation of the Fellowship Hall is situated above the rear parking area atop a knoll supported by a brick retaining wall. This elevation exposes the lower level of the Fellowship Hall at the west end. Providing access from the parking lot to this part of the building is a concrete staircase. The south elevation is penetrated by rectangular wood framed casement windows. The plane of this elevation is broken by two projections over which the north slope of the roof breaks to form a shed-like covering. A series of stepped buttresses breaks the expanse of the easterly portion of the north elevation. At the far west end of the lower floor area of this elevation is a large opening that appears to have once been glass, but which has been altered with a wood and glass panel.

The west elevation terminates into Westminster Hall, a classroom building. Visible in this terminus area from the rear parking lot are three rectangular windows and a door that leads into the lower level. Centered on the peak of the Fellowship Hall roof is a copper spire topped by a cross. The west gable end has an attic vent made of clay pipes in the shape of a cross.

Westminster Hall: Westminster Hall was built along with the first phase of construction in 1936. Unlike the balance of the buildings of this phase, however, Westminster Hall is of conventional stud wall construction, covered in a smooth sand finish stucco in a natural grey color that generally matches the poured concrete walls of the other buildings. Like the other buildings on the site, Westminster Hall has a ground floor that faces an upper courtyard and a lower floor that faces the rear parking lot.

CONTINUATION SHEET

P3a Description

The north elevation of Westminster Hall is divided into two steps, with the westerly most step set back a small distance from the easterly step. These steps are reflected in slight changes in roof elevations, exposing a partial gable end where the steps meet. The upper and lower floors of this elevation are penetrated by rectangular windows of varying dimensions. Some of these windows are modern aluminum framed double glazed types and others are wood framed fixed and casement types. At the far east end of the roof is a single dormer with a wood framed casement window above which is an attic vent made up of clay pipes. The lower floor is accessed by doors of varying styles. Extending midway from this elevation at the break area is a shed roofed extension covered in red clay tiles. Westminster Hall provides day-care services and, adjacent to the parking lot is a play area enclosed by a wrought iron fence.

The west elevation of Westminster Hall is a two story gabled wall with square windows in the upper and lower floors and a single wood panelled door centered on the lower level. The door has an arched surround. In the upper gable end is a rectangular attic vent made up of clay pipes. All of the window openings have been retrofitted with modern aluminum framed dual glazed glass windows.

Bridging Westminster Hall to the Christian Education building is a red clay tile roofed cloister. A basement below the cloister is revealed in the easterly facet. This portion of the basement has poured concrete walls penetrated by one window and one door. The easterly portion of the upper cloister wall is broken by a series of three plaster finished bays separated by concrete columns. The two outer bays are penetrated by rectangular wood framed windows. The westerly upper facet is a solid wall with no fenestration.

The south elevation of Westminster Hall reveals a walkway covered by a shed extension of the building's roof. At the easterly end of this south facing roof is a dormer with a modern dual glazed aluminum framed glass window and an attic vent made up of clay pipes. At the westerly end of the roof is a chimney with a decorative brick cap. Supporting the walkway are simple square concrete columns. A series of square panelled wood doors and wood framed casement windows provide access and light to the rooms that are located in this area. The square concrete columns continue around to the cloister leading to the Christian Education building. Flanking the covered walkway and bridge is a courtyard including a childrens' play area enclosed in a modern wrought iron fence. Paving in the courtyard and walkway areas is a combination of brick and concrete.

To the east of Westminster Hall's south elevation is the terminus of the passageway between the front and rear courtyards. This terminus is dominated by a pointed arch, above which is a balcony with wrought iron railing.

Christian Education Building: The Christian Education building was added in 1962. It is a simple rectangular two story frame structure with walls covered in smooth plaster. Like the Fellowship Hall and Westminster Hall it exposes its lower floor only on the frontages of the rear parking area. Unlike the other buildings on the site, its gable roof is covered in red asphalt shingles. The overhangs of the roof have

CONTINUATION SHEET

P3a Description

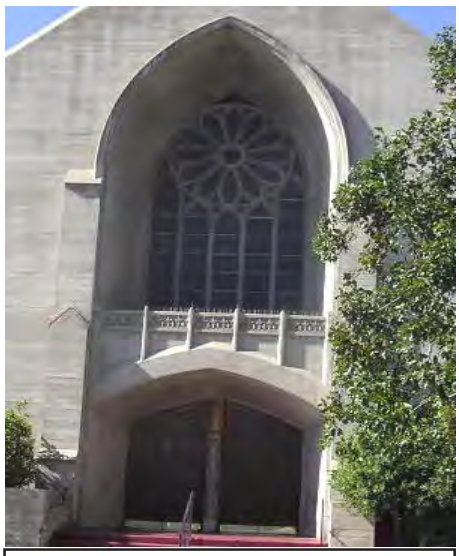
wooden bargeboards that hide the roof's rafters.

The westerly portion of the north elevation fronts onto the parking lot oriented childrens' play area, enclosed in modern wrought iron fencing. This building wall is penetrated by rectangular aluminum framed windows providing light to the upper and lower floors.

The easterly portion of the north elevation fronts onto the rear courtyard. Its smooth plaster wall is penetrated by wood and glass windows and doors on the easterly end and by aluminum framed rectangular glass windows on its westerly end.

The east and west elevations essentially mirror each other, expressing themselves with notched areas on either side of the gable ends and simple solid wood doors, aluminum framed windows and copper ventilation grilles.

The south elevation butts directly up to the parking lot and is penetrated by simple rectangular aluminum framed glass windows on both upper and lower floors and by and a single pair of solid wood doors centered on the elevation.



SANCTUARY EAST ELEVATION

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

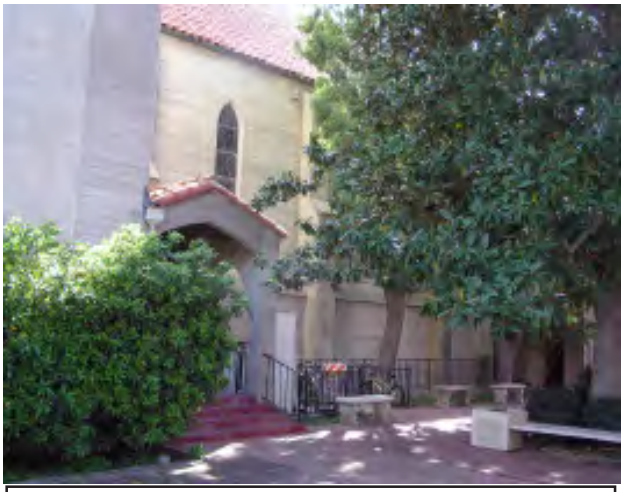
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 *Resource Name or # (Assigned by recorder) Calvary Presbyterian Church

*Recorded by Bill Wilkman M.A. *Date July 29, 2013 ☒ Continuation ☐ Update

P3a Description



SANCTUARY NORTH ELEVATION (FRONT)

CLOSE-UP OF NORTH ENTRY

SANCTUARY SOUTH ELEVATION

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 *Resource Name or # (Assigned by recorder) Calvary Presbyterian Church

*Recorded by Bill Wilkman M.A. *Date July 29, 2013 ☒ Continuation ☐ Update

P3a Description

WEST VIEW OF PORTE COCHERE

SANCTUARY WEST ELEVATION

SANCTUARY WEST ELEVATION

SANCTUARY NORTH ELEVATION (REAR)

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

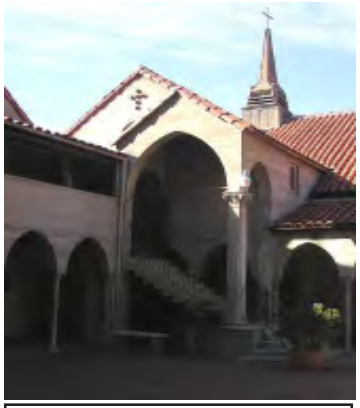
Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Calvary Presbyterian Church

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

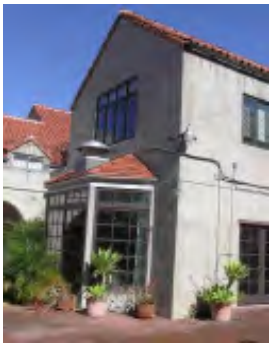
P3a Description

OFFICE WING EAST ELEVATION



OFFICE WING
EAST ELEVATION
STAIRCASE

OFFICE WING WEST
ELEVATION WITH MEET-
ING ROOM EXTENSION



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 *Resource Name or # (Assigned by recorder) Calvary Presbyterian Church

*Recorded by Bill Wilkman M.A. *Date July 29, 2013 ☒ Continuation ☐ Update

P3a Description

FELLOWSHIP HALL EAST AND SOUTH ELEVATIONS

DETAIL OF FELLOWSHIP HALL EAST ELEVATION

ENTRIES TO FELLOWSHIP HALL SOUTH ELEVATION

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 *Resource Name or # (Assigned by recorder) Calvary Presbyterian Church

*Recorded by Bill Wilkman M.A. *Date July 29, 2013 ☒ Continuation ☐ Update

P3a Description

FELLOWSHIP HALL NORTH AND WEST ELEVATIONS

WESTMINSTER HALL NORTH ELEVATION

WESTMINSTER HALL WEST ELEVATION

CLOISTER FROM WESTMINSTER HALL TO CHRISTIAN EDUCATION

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 *Resource Name or # (Assigned by recorder) Calvary Presbyterian Church

*Recorded by Bill Wilkman M.A. *Date July 29, 2013 ☒ Continuation ☐ Update

P3a Description

WESTMINSTER HALL SOUTH ELEVATION

CHRISTIAN EDUCATION NORTH ELEVATION, WESTERLY END

CHRISTIAN EDUCATION NORTH ELEVATION, EASTERLY END

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

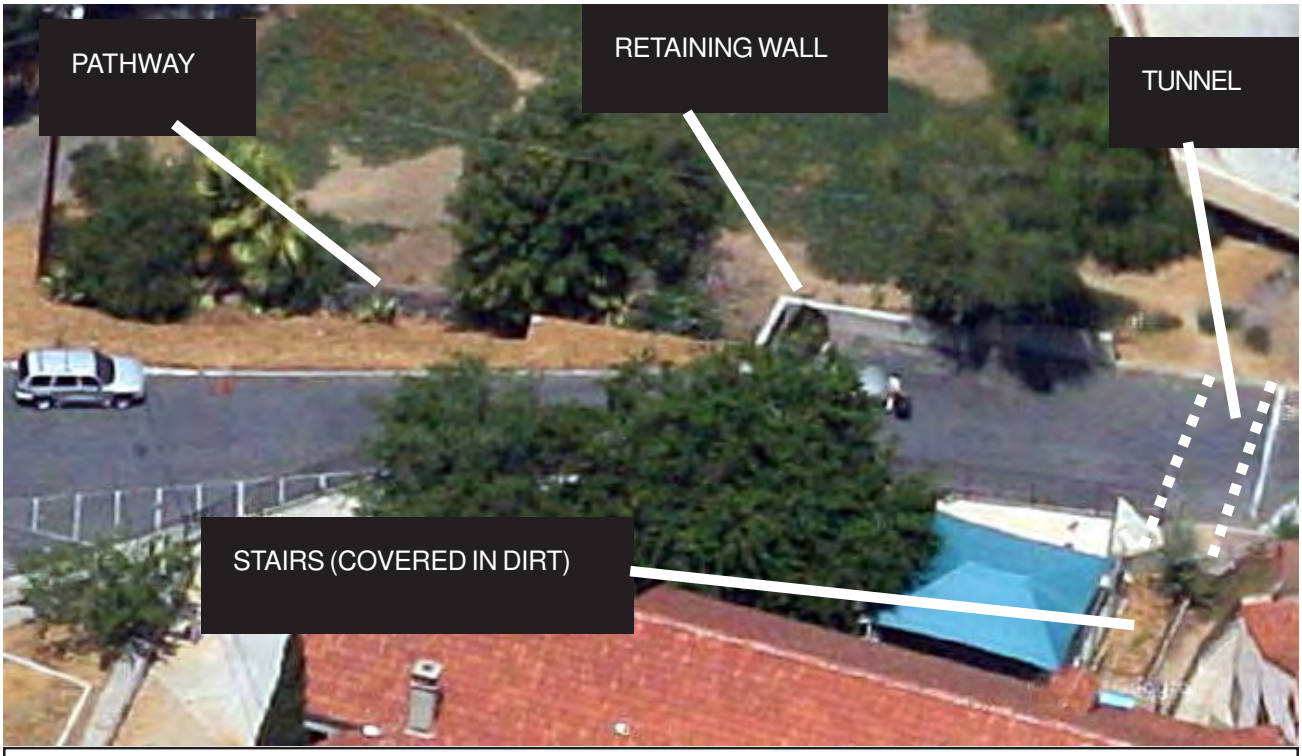
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 *Resource Name or # (Assigned by recorder) Calvary Presbyterian Church

*Recorded by Bill Wilkman M.A. *Date July 29, 2013 ☒ Continuation ☐ Update

P3a Description



STAIRS, TUNNEL, PATHWAY FEATURE

TUNNEL OUTLET TODAY

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** 4495 Magnolia Ave, Riverside, CA **CHR Status Code:** 3S
B1. Historic Name: Calvary Presbyterian Church
B2. Common Name: Calvary Presbyterian Church
B3. Original Use: Church ***B4: Present Use:** Church
***B5. Architectural Style:** Gothic Revival
***B6. Construction History:** (Construction date, alterations, and date of alterations) Fellowship Hall, classrooms, and offices: 1935; Sanctuary basement: 1940; Sanctuary completed: 1955
***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Carleton Monroe Winslow Sr. & Jr. **b. Builder:** Harman & Company, Eric Entman
***B10. Significance Theme:** Church development in the City of Riverside **Area:** Riverside, CA
Period of significance: 1935-1955 **Property Type:** HP-16 Religious Bldg **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

B10 Significance

a. Historic Context

Calvary Presbyterian Church has an extensive history dating back to 1887. For a thorough history of the Church, the reader is referred to the 2009 WHS report: *Cultural Resources Impacts Evaluation of Riverside Community Hospital Bed Tower Replacement and Cultural Resources Survey and Evaluation of Original Hospital Building and Calvary Presbyterian Church* (WHS 2009: 46-70) on file at the City of Riverside Planning Division. This section draws heavily from the above document, and is designed to serve as a brief history of Calvary Presbyterian Church in relation to Riverside Community Hospital.

The church is a designated City of Riverside Structure of Merit and it was found eligible for listing on the National Register of Historic Places in the 2009 WHS report.

The first Presbyterian church in Riverside was located in the Arlington area of the City. Known as Magnolia Presbyterian Church, it was dedicated on April 25, 1881 (Hall 2008: 9) Among the parishioners who traveled from the downtown area to Arlington each Sunday, were Matthew Gage and his wife Jane. When Jane discovered she was pregnant, the Gage family decided to initiate Presbyterian services in Riverside's downtown Pavilion, located at the northwest corner of Main and Seventh (now Mission Inn Avenue) Streets. (Hall 2008: 61) Presbyterians living in and near the downtown area came to prefer the Pavilion to the more distant Arlington church and the numbers of participants grew.

On June 19, 1887, the Presbyterians formally established the downtown congregation as a new Presbyterian Church under the auspices of the Los Angeles Presbytery. (Jenkins 1973: 1) Early services were held in a variety of places, including the Pavilion, the Loring Opera House, and the Riverside Odd Fellows Hall. In 1890, the church voted to purchase a site at Ninth and Lime Streets on which to build its own church, and on July 19, 1891, the new church building stood completed. (McGugian : 116-117)

By 1931 it was becoming apparent that the Ninth and Lime church could not accommodate the needs of the growing congregation. While the onset of the Great Depression had caused other churches to reduce their ambitions, Calvary saw the economic downturn as an opportunity to take advantage of lower property and labor costs to build a new church. At the church's annual meeting in April of 1931 the decision was made to fund a new church. (Ibid: 117)

Mr. H.A. Lynn, Chairman of the Board of Trustees, recommended the congregation purchase the Magnolia Avenue site where the church is located today. Known as the School/Hospital Site, it was partly owned by the Board of Education and partly owned by Riverside Community Hospital. To

B10 Significance

stimulate interest in a building fund campaign, open-air church services were occasionally held on the vacant building site. (Ibid: 118)

To design the new building complex, the church chose prominent Los Angeles architect Carleton Monroe Winslow. He had designed a number of other churches among which were Community Presbyterian Church in Beverly Hills, First Baptist Church in Pasadena, and Mary Star of the Sea Church in La Jolla. (*Los Angeles Times*, 10-17-1946: 12) He was also responsible for First Congregational Church in Glendale, Saint Augustine-by-the-Sea Church in Santa Monica, and Vermont Square Methodist Church and School in Los Angeles. (http://www. digital.lib. washington.edu, Accessed 2009)

While most Southern California churches in that day were being designed in Spanish Colonial influenced architecture, Calvary chose to build in a Gothic Revival style, an architectural school having deep roots in the Presbyterian tradition. Figure 98 is a rendering of the proposed church. Church funds did not allow for the immediate completion of the entire planned church campus, so the congregation decided to build as its Sanctuary, what would later become the church's Fellowship Hall. While much smaller than the planned sanctuary, this first phase would provide one third more room than the downtown church. In the rendering, the Fellowship Hall is the smaller building to the right. The Sanctuary, which would not be completed until 1955, is to the left. The cloister walk between the two buildings was never built. In addition to the Fellowship Hall, the first phase of construction also included the church offices and a classroom building. On October 21, 1935 a building permit was secured for the first phase of construction, with C.M. Winslow listed as architect and Harman & Co. listed as contractor. (City of Riverside Building Permit #16730) Construction commenced on November 10, 1935, and the cornerstone was laid on February 2, 1936. (McGuigan 1987: 119)

The final services were held in the downtown church on June 28, 1936 and the congregation subsequently moved into the new first phase buildings at the Magnolia site. By Easter 1937 the entire debt was paid and on June 13 of that year, Calvary's Jubilee, the church was dedicated. (Ibid: 118-119)

With continued growth straining the church's facilities, a new building fund campaign was initiated in 1939., (Ibid: 119) and on September 20, 1940 a building permit was issued for the construction of the basement portion of the permanent Sanctuary building. The upper part would have to wait until more funds could be secured. Carleton M. Winslow continued on as architect and Eric. W. Entman was hired as contractor. (City of Riverside Building Permit #22348) Still remaining to be completed was the above-grade basilica style Sanctuary.

B10 Significance

By 1953, the membership had grown to 2,135 and the need for the completion of the church campus was becoming critical. (McGuigan 1987: 79) The Building Fund had received cash and pledges totaling about $215,000, with 65% of that figure in cash. It would take between $200,000 and $225,000 to complete most of the Sanctuary. This amount would not, however, allow for the construction of the Peace Tower, heating, pews, organ, or various furnishings. These would add $100,000 to that figure. Despite the known shortage of funds, the Building Committee recommended that construction commence. (Ibid)

The Committee projected that funds to complete all needed improvements would be secured through the continued growth of the church. In any event, the church had already outgrown its available space and more room was needed. On August 24, 1954 a building permit was issued for to complete the Sanctuary. Architectural services for the work were provided by Winslow's son, Carleton Monroe Winslow Jr. Contracting services were again provided by Eric Entman. On July 19, 1955 a final inspection was completed (City of Riverside Building Permit #21385), and on September 15, 1955 the Sanctuary was dedicated. Seating capacity was 800. (McGuigan 1987: 121)

The final phase of construction was initiated when, in June of 1961, the Congregation approved a building fund of $225,000 for a Christian Education building and the remodel of the Fellowship Hall. (Ibid: 122) Riverside architect Clinton Marr prepared the plans and a building permit was issued on July 18, 1961 with Eric Entman again listed as contractor. Final Inspection was completed on September 12, 1962. (City of Riverside Building Permit #1109)

b. Historic Significance

Calvary Presbyterian Church appears to be eligible for listing on the National Register of Historic Places at the Local Level, earning it a CHR Status Code of 3S (Appears eligible for NR through survey evaluation.) It is also eligible for City of Riverside designation as a Cultural Heritage Landmark. Its status as a National Register eligible property also makes it eligible for listing on the California Register of Historical Resources.

Calvary Presbyterian Church has been surveyed three times in the past, but none of these surveys was accomplished at an intensive level. The following is a summary of these surveys:

1977: This undated survey was completed c. 1977 by volunteers supervised by Charles Hall Page & Associates, Inc. The Page survey was the City's earliest historical survey accomplished at a time when uniform standards for evaluating historical resources were in their infancy. While it records the basic resource, it makes no conclusion regarding its eligibility for historical designation.

B10 Significance

1980: In 1980, the church was surveyed on State Department of Parks and Recreation Historic Resources Inventory forms and submitted to the State for inclusion on the State's Historic Resources Inventory. This survey found the church significant for both its architecture and its association with prominent architect Carleton Monroe Winslow, and it was accepted to the State Historical Resources Inventory on that basis. The survey did not, however, place the church in a particular category of historical designation. Nonetheless, on the basis of this survey, the church was designated a Structure of Merit at the Cultural Heritage Board's October 7, 1981 meeting.

2003: In 2003, the church was again surveyed by Myra Frank and Associates as part of the City's effort to product a new Downtown Specific Plan. This reconnaissance level survey resulted in a "3S" Status Code, signifying a determination that it appears eligible for National Register of Historic Places listing.

2009: In 2009, WHS again surveyed the property and again found it eligible for the National Register.

The present survey, conducted at an intensive level, concurs with the 2003 and 2009 survey findings of National Register eligibility. Its qualification for listing on the National Register is based upon National Register of Historic Resources Criterion C as follows:

C. Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction.

In support of this conclusion, it is noted that Calvary Presbyterian Church is one of the more prominent board-formed concrete structures in the City of Riverside and the City's only large-scale Gothic Revival church. Other board-formed concrete structures of similar complexity and stature in the City of Riverside include the Rotunda Wing of the Mission Inn and the Municipal Auditorium, both in the downtown area. The craftsmanship, high level of design detail, and overall excellent condition of the church complex are exceptional, qualifying the church as an expression of high artistic value. Having been designed by prominent architect Carleton Monroe Winslow, the church also qualifies for listing as the work of a "master." Winslow is recognized as a highly accomplished architect of ecclesiastical design as is documented in the Historic Context section.

Calvary Presbyterian Church also possesses a high level of historical and architectural integrity. In this regard it strongly embodies National Register aspects of integrity including those of location,

B10 Significance

design, materials, workmanship, feeling, and association. Materials integrity issues are limited to window openings that have been retrofitted with modern aluminum framed dual glazed windows. The retrofits are not obvious, using dark anodized aluminum frames and mullions and divided lights similar to the original windows. All of the new windows are in areas with south and west exposures where heat penetration can be a problem. Integrity of setting has been somewhat compromised by the growth of the hospital and it could be further compromised by the proposed Phase II Bed Tower, depending upon the final design of this building. Design guidelines and mitigation measures are presented later in this report to address any concerns over integrity of setting.

The following additional information pertains to this building:

- **Period of Significance:** 1935-1955, the period during which the core church campus was constructed.
- **Significance Theme:** Churches in the City of Riverside
- **Contributors:**

  √ Sanctuary
  √ Office Wing
  √ Fellowship Hall
  √ Westminster Hall
  √ The front entry design, including its parking layout, courtyard, and front setback along with all mature trees in these areas
  √ All retaining walls, iron gates and railings.
  √ The stairs, tunnel, and pathway linking the church property with the former Evans Athletic Park and nearby off-site parking area.

- **Character Defining Features:**

  √ All natural concrete board formed building walls and decorative features.
  √ All original windows and doors.
  √ All stained glass.
  √ All clay tile roofing and building vents.
  √ All metal decorative elements, including the Sanctuary cross and spire and the Fellowship Hall cupola.

It was not within the scope of this work to survey the interiors of the Sanctuary and Fellowship Hall; however, these may be contributors and should be surveyed before any application is made for National Register listing. The Christian Education building is generally utilitarian in design and lacks the architectural quality of the other buildings on the campus. It is, therefore, not a contributor.

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Persons Consulted:

Virginia Austerman, Archaeologist
Kevin Hallaran, Riverside Metropolitan Museum
Ruth McCormick, Historian, Local History Resource Center
Erin Gettis, City of Riverside Principal Planner and Historic Preservation Officer
Patricia Brenes, City of Riverside Principal Planner
Clinton Marr, Retired Architect
Tanya Sorrell, Architectural Historian
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital
Dr. W. Dean Kokjer, Retired Minister, Calvary Presbyterian Church
Robert Mease, Member, Calvary Presbyterian Church
Dallas Holmes, Member, Calvary Presbyterian Church

Appendix M: **Primary Record & Building, Structure, Object Record**
Riverside Community Players - 4026 Fourteenth Street

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

PRIMARY RECORD

Trinomal_____
CHR Status Code 5S3

Other Listings_____
Review Code_____Reviewer_____Date_____

Page 1 **of** 19 ***Resource Name or #** (Assigned by recorder.) Riverside Community Players
P1. Other Identifier:
***P2. Location:** ☐**Not for Publication** ☒**Unrestricted** ***County:** Riverside
and (P2b and P2c or P2d. Attach Location map as necessary.)
***b. USGS 7.5 Quad:** Riverside West **Date:** 1967 PR 1980 **T:** 2S **R:** 5W Unsectioned SB**B.M.**
c. Address: 4026 14th Street, Riverside, CA
d. UTM: (Give more than one for large and/of linear resources.) **Zone** 11 **mE**/ 464676 **mN** 3759748
e. Other Locational Data: (eg: parcel #, directions to resource, elevation, etc. as appropriate. APN 217-300-007
South of 14th Street, east of Brockton Avenue
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, boundaries.)

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes.)
***P4. Resources Present:**☒ Building☐ Structure☐ Object☐ Site☐ District☐ Element of District☐ Other (Isolates, etc.)
P5a: Photo or Drawing:** (Photo required for buildings, structures, and objects.)P5b. Description of Photo:** (View, date, Accession #) North and west elevations - www.maps.google.com, Accessed 2013

***P6. Date Constructed/Age & Sources:**
1953, Riverside City Building Permit

☒Historic ☐Preshistoric ☐Both
***P7. Owner and Address:**
Riverside Community Players
4026 14th Street
Riverside, CA 92501

***P8. Recorded By:**
Bill Wilkman M.A.
Wilkman Historical Services
P.O. Box 362
Riverside, CA 92502-0362
***P9: Date Recorded:**
July 29, 2013
***P10: Survey Type:**
Intensive-Level, CEQA Compliance
***P11: Report Citation:** (Cite survey report and other sources, or enter "none")
Cultural Resources Survey and Evaluation - Riverside Community Hospital Specific Plan - August 20, 2013

***Attachments:** ☐ **None** ☒ **Location Map** ☒**Continuation Sheet** ☒**Building, Structure, Object Record** ☐**Archaeological Record** ☐**District Record** ☐ **Linear Feature Record** ☐**Milling Station Record** ☐**Rock Art Record** ☐**Artifact Record** ☐**Photograph Record** ☐**Other (List):**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____
Trinomal _____

LOCATION MAP

Page 2 **of** 19 ***Resource Name or #** **(Assigned by recorder)** Building A - 4445 Magnolia Ave, Riverside, CA

***Map Name:** Location Map ***Scale:** As Noted **Date of Map:** Riverside West 1967 PR 1980

LOCATION IN THE CITY

SOURCE: UNITED STATES GEOLOGICAL SURVEY

CONTINUATION SHEET

P3a Description

As originally designed, the Riverside Community Players' building was a simple but elegant example of Modern architecture by renowned local architect Herman O. Ruhnau. Over the years, however, the building has been compromised by a series of unsympathetic additions that have detracted from its original design. The descriptions below, will attempt to distinguish those aspects of the building that are original or compatible to the original design, from those that are not.

The Players' building is a generally rectangular structure situated on a concrete slab foundation. Two types of roofs are evident. The original building had a flat roof situated behind a parapet wall, while later additions, primarily to the south and east sides of the building are characterized by shed roofs sheathed in composition shingles. A small added canopy that wraps from the west to the north elevations has a flat roof in character with the original building. Unless otherwise noted, all exterior walls are sheathed with smooth texture stucco The parapet wall of the original flat-roof building and the edges of all flat roofed canopies are capped by wide sheet metal clad metal fascias. All windows and glass doors are guarded with wrought iron security grills, none of which appear to be original to the building.

Community Players North Elevation: The north elevation (facing Fourteenth Street) is largely dominated by the relatively plain stucco wall of the original theater "arena box". At the west end, this wall mass is broken by a canopy that is a compatible extension of the original canopy on the west elevation. Like the west elevation canopy, the extension is faced with a sheet metal clad fascia and terminates at a stack bond brick wing wall. Above the canopy is a marquee sign flanked to the east by a comedy-tragedy theater mask image. Two pop-outs from the westerly end of the building accommodate openings into the snack bar. These openings are secured with metal bars and closed off with wooden doors. To the east of these openings is a single wooden man-door that allows theater patrons to access a large patio area during intermissions. The north end of a later shed-roof addition is visible at the east end of this side of the building.

Community Players West Elevation: The west elevation is largely dominated by the theater's arena box, split horizontally by a flat roofed canopy, the center portion of which is part of the original building's design. The upper part of this wall serves as a location for a Community Players sign situated on the fascia at the top of the parapet and a Community Players logo situated on the stucco wall below. Toward the east end of this wall is a door that was once used to access the theater control room. Players President Katheryn Gage told WHS that the theater did not at first have a stairway to the control room. At that time, access to this room was provided via an ladder leading to the above mentioned door.

Below the canopy in the northerly portion of this elevation is a ticket sales projection along with the entrance to the theater. The rendering of the original design does not show the ticket sales projection as currently configured and President Gage told WHS that long-term members related that this improvement was added later. It is nonetheless in character with the original building design. The ticket sales projection is

P3a Description

characterized by clear anodized aluminum windows situated atop a wainscot finished with tongue and groove vertical wood siding. The ticket counter is covered in salmon colored Formica.

The theater's entry foyer, a part of the original building design, is clad in wood framed fixed glass on the west and north, and anchored by a stacked bond brick wing wall to the south. A clear anodized aluminum storefront door provides access to the entry foyer from the north.

To the south of the wing wall is a building extension clad in vertical tongue and groove wood at the top of which is a band of clerestory wood framed corrugated frosted glass windows that open hopper style from the inside. The area corresponding to the first three clerestory windows south of the wing wall is equipped with a canopy that is open to the air above. The Ruhnau rendering depicts this open canopy as a place through which to grow lacy vertical plant materials. Further to the south, the roof abruptly changes to a composition shingle clad shed roof that is a later addition.

Community Players South Elevation: The south elevation is largely dominated by a shed-roof addition that is unsympathetic to the original Ruhnau design. A relatively small part of the original theater arena box is visible at the top, with its wide fascia capped parapet on which a Community Players sign is mounted.

Below the shed roof at the far west end, is a return of the vertical tongue and groove wood wall from the west elevation that is a part of the original design. This terminates in a plain smooth textured stucco wall that appears to be associated with the shed roof.

At its west end, this wall is penetrated by a pair of wooden doors accessed via concrete stairs that are flanked by wrought iron railings. To the east of this pair of doors are two pairs of vertically oriented rectangular aluminum framed windows with frosted glass and iron security grilles. Some of the windows have slider elements at the top and some have been modified to accommodate window air conditioners. Between each pair of windows is a single wooden door accessed via concrete stairs flanked by wrought iron railings. At the far east end of this elevation, the building wall changes to vertical T-1-11 plywood, penetrated by a door that is also clad in this material. A stack bond concrete block wainscot east of this door suggests this part of the building may have at one time been an open patio.

Community Players East Elevation: The east elevation is essentially the "back door" to the theater. It was a later addition to the theater and its shed roof buts up to the original theater arena box. At the south end of this elevation is a stacked bond wainscot above which is T-1-11 plywood paneling. As noted above, this area may have been an open patio at one time. The balance of the wall is smooth stucco penetrated by a pair of solid wood doors leading to the Ben Lewis storage/workshop room Attached to the north end of this elevation is a barbed wire topped chain link fenced enclosure used for storage.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

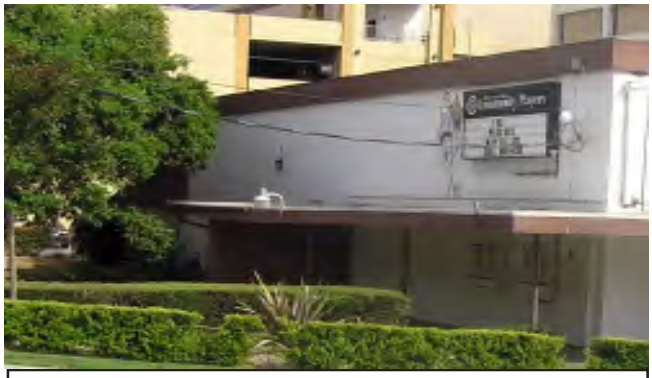
 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Players

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

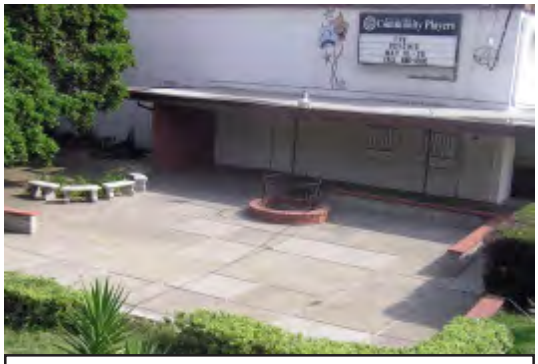
Site/Landscape Features: Foundation planters soften the view to the building's south and west sides and the area between the building and Fourteenth Street setback is improved with a large concrete patio complete with seating and a fire pit. Lush landscaping fills in the balance of the front setback..

The patio records some of the history of the theater group through inscriptions, handprints, and footprints impressed into segments of the patio's concrete slab. As noted earlier many of these inscriptions were created in association with a fund raiser held in 1967.



NORTH ELEVATION - RIVERSIDE COMMUNITY PLAYERS

EAST ELEVATION - RIVERSIDE COMMUNITY PLAYERS



PATIO - RIVERSIDE COMMUNITY PLAYERS

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomal _____

 ***Resource Name or #** **(Assigned by recorder)** Riverside Community Players

Recorded by** Bill Wilkman M.A.Date** July 29, 2013 ☒ **Continuation** ☐ **Update**

P3a Description

WEST ELEVATION - RIVERSIDE COMMUNITY PLAYERS

SOUTH ELEVATION - RIVERSIDE COMMUNITY PLAYERS

RIVERSIDE COMMUNITY PLAYERS - SITE IMPROVEMENTS

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

 ***Resource Name or #** Riverside Community Players **CHR Status Code:** 5S3
B1. Historic Name: Riverside Community Players
B2. Common Name: Riverside Community Players
B3. Original Use: Theater ***B4: Present Use:** Theater
***B5. Architectural Style:** Mid-Century Modern
***B6. Construction History:** (Construction date, alterations, and date of alterations) Completed 1953

***B7. Moved?:** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Herman Ruhnau **b. Builder:** Rooth & Cars
***B10. Significance Theme:** Cultural Institutions in the City of Riverside **Area:** Riverside, CA
Period of significance: 1925-2013 **Property Type:** HP-10 Theater **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope, and integrity)

(See Continuation Sheets)

B11. Additional Resource Attributes: (List attributes and codes.) None
***B12. References:** (See Continuation Sheets)
B13. Remarks:

***B14: Evaluator:** Bill Wilkman, M.A., Wilkman Historical Services, P.O. Box 362, Riverside, CA 92502-0362

Date of Evaluaton: July 29, 2013

(This space reserved for official comments.)

B10 Significance

a. Historic Context

The current Community Players property and properties to its south have a very colorful early history that begins with their use for farming and progresses to a rich sports-related history, largely centered around baseball. The information provided here is only a brief summary of that history. For a thorough examination of history of the theater property prior to its development as a theater, the reader is referred to a report completed by WHS in January of 2013, entitled *Riverside Community Hospital Brockton/Tequesquite Medical Office Building and Parking Structure Cultural Resources Impacts Report.* (WHS 2013) An extensive summary of the early history of the subject property and adjacent properties may also be found in the current report in Section 9, Historic Context - Pre-Hospital History of the Lower Hospital Campus.

The Community Players property was originally a portion of Riverside Colony Farm Lot 6 of the original subdivision map that gave order to the Riverside Colony in 1871. The Colony's Farm Lots were intended to serve as agricultural lands to help support the Colony's economic base and to help fulfill the daily needs of life in the urban core of Riverside, known as the "Mile Square."

Assessor records for the years 1892 through 1903 indicate that a portion of Colony Farm Lot 6 coupled with all or portions of adjacent farm lots 7, 155, and 156 were owned by Mrs. Berta S. Finch. In 1903, Mrs. Finch recorded the B.S. Finch Tract, the division of portions of Farm Lots 6 and 7 into 26 town lots. The B.S. Finch tract was situated immediately west of the Community Players property. Mrs. Finch farmed most of her property and also lived in a house likely located somewhere south of the existing Community Players lot.

In the early 1900s, the subject property, along with other adjacent farms in the arroyo bottom, were redeveloped as athletic fields. Donated to the City of Riverside by Samuel Evans Jr. in 1906, Evans Athletic Park, as it became known, was Riverside's central venue for numerous significant sports competitions spanning the following eight decades.

The founding of the Community Players occurred in 1925, under the leadership of two persons with backgrounds in the theater arts. Janet Scott and James Coleman Scott (no relation) organized the presentation of four programs of one-act plays and one three-act play under the auspices of the Riverside Women's Club. At that time, the group was known as the Players Group of the Drama Department of the Women's Club. Encouraged by the success of the plays presented via the Women's Club, Janet and James Scott decided in 1926 to form their own theater group. (Riverside Community Players 1975)

B10 Significance

At its first general meeting, Janet Scott was selected to be the group's Director and Joseph Sheldon Long was selected to be Chairman. Within a short time, James Coleman Scott replaced Mr. Long as Chairman. (Ibid)

The group's first venue as an independent theater association was the Loring Opera House located on the north side of Seventh Street (now Mission Inn Avenue) between Main and Market Streets, in downtown Riverside. Also, during that first season, eight workshop programs of one-act plays were performed in Miss. Scott's one-room studio. Lacking a formal stage, the plays were conducted on the floor of the studio, with the audience sitting cross-legged. (Ibid)

While the group's plays were successful, the Players did not find immediate success with a venue for its productions. The Loring provided an excellent facility for the Players' performances during its first two seasons; however, access to the theater was interrupted by a stagehand strike during the second season. This necessitated a temporary move to Poly High School, where three productions were performed before returning to the Loring. (Ibid) In 1928, however, the Loring was lost as a venue, when it was converted to a motion picture theater. This forced a temporary move to Central Junior High School.

Feeling the need for a permanent facility, the Community Players launched a fund-raising campaign in 1929, amassing over $4,000 from more than 400 donors. With these funds, the group purchased the unused Washington School building at the southwest corner of Twelfth and Almond Streets. But the group was only able to secure title to the building; the land remained the property of the Board of Education. (Ibid)

With assistance from the Kiwanis Club, the school house was remodeled into a 224-seat theater. In May of 1930, the extensively remodeled building was opened with a production of "The Queen's Husband". Players founder Janet Scott performed a star role in the play, but left for Hollywood at the end of the 1931-1932 season to pursue a career as a leading performer on dramatic radio programs. (Ibid)

The Washington School venue, served the Players for a 20-year period, during which the Players weathered two significant storms. The first was the Great Depression that saw audience attendance plummet. And, the second was World War Two, which sent many prospective actors into war-related duties. To overcome the first, the Players remained resolute in their determination to persist regardless of the diminishment of audience numbers. During the second crisis, the group tapped into the mobile talent pools of the nearby military bases, ferrying volunteer actors to and from their duty stations. (*Riverside Daily Enterprise,* 7-3-1974)

B10 Significance

In 1950, the Players were again faced with the necessity of moving, when the land owning Riverside Board of Education announced that it would soon need the property for a parking lot to serve its nearby offices. (Ibid) Saving the day was City Recreation Director Edith D'Elsicu, who orchestrated the construction of the "Playbox Theater" in an unused room of the Park & Recreation Department Administration Building. The beautiful Mission Revival style structure had formerly served as the Girl's High School. Sadly, after serving the Players' needs for only two seasons, the City chose to demolish this building to provide more parking downtown. Once again, the Players were looking for a new home.

From the Girls' High School, the theater group made a short one-year stop at the Riverside Junior College stage to continue its productions uninterrupted. (*Riverside Press Enterprise,* 11-27-1994)

While bridging the gap at Riverside Junior College, the Players engaged in a fund-raising campaign to pay for the erection of a purpose-built theater at 4026 Fourteenth Street, the current location of the Players' theater. Once again, however, the Players would own only the building but not the land. The land was an unused part of the Evans Athletic Park and was owned by the Riverside Board of Education. When arrangements were made to build a theater there, the land was being leased by the City of Riverside for a token amount of $1.00 per year. The City, in turn, entered into a 40-year sublease with the Community Players for the same token amount. (*Riverside Daily Press,* 6-10-1953)

Herman Ruhnau provided drawings for the theater and construction was handled by Rooth and Carr.

As noted earlier in this report in relation to the discussion of his design of the existing Hospital Bed Tower (Building B), Ruhnau is recognized in the City of Riverside's Modernism Context Statement as one of Riverside's most prominent architects. The following is a summary of the biographical information provided in greater detail in the Building B evaluation.

Ruhnau was born in Pasadena, California on September 1, 1912, but spent the better part of his youth in Santa Barbara. In 1929, Herman and his family moved to Riverside, where Ruhnau completed high school and went on to attend classes at Riverside Junior College. Ruhnau got his architectural training from the University of Southern California and subsequently worked for several well-known architectural firms. During World War II he was an architect for the U.S. Navy's Bureau of Yards and Docks. (Paul 1954: 466) In 1946, Ruhnau opened a Riverside branch office for Los Angeles based architectural firm of Heitschmidt and Matcham, and in 1950, he opened his own architectural firm in Riverside. (Christopher A. Joseph and Associates 2009: 27)

Among the significant Riverside projects for which Ruhnau's firm was responsible are the following:

B10 Significance

- RCC Cosmetology Building (1957)
- Public Defender's Office, 4200-32 Orange St (1958)
- RCC Cutter Pool Complex (1957)
- Press Enterprise Building, 3514 14th St (1958)
- Marcy Library, 3711 Central Ave (1958)
- John Adams School, 8362 Colorado Ave (1958)
- UCR Entomology Building (1960)
- Community Hosp Bed Tower, 4445 Magnolia Ave (1966)
- UCR Health Services (1961)
- Riverside Police Department, 4102 Orange St (1965)
- Riverside County Law Library, 3535 Tenth Street (1969)
- La Sierra High School, 4145 La Sierra Avenue (1969)

(Ibid)

The Community Players building was designed to accommodate a "theater in the round" format with a stage located on the building's floor and seats arranged arena style around the entire stage perimeter. Ben Lewis, Players President in 1953, and Mayor of the City of Riverside, told the *Riverside Daily Press* that the theater had been designed so it could be converted at a later date to a conventional proscenium-arch style theater, with separate stage and curtain, subject to available funds. (*Riverside Daily Press,* 6-10-1953) And, indeed, current Community Players President, Katheryn Gage found plans depicting the alteration of the theater to a thrust stage arrangement.

Groundbreaking for the theater occurred on August 17, 1953, (*Riverside Daily Press,* 8-18-1953) and the new playhouse was dedicated on October 16, 1953 with a production of "Goodbye Again". Reporter Beth Teters noted that the acoustics were excellent and the view to the performance was unobstructed. (*Riverside Daily Press,* 10-17-1953) The total cost of the original building was $17,500. Building permit records document that additions were made to the building in 1956, 1958, 1961, and 1962, but these records do not appear to be complete as it appears the building was altered more than four times. While it is not clear from the permits exactly what was added with each permit, Ms. Gage noted that the additions included dressing rooms, a workroom/storage space (named for Mayor Ben Lewis), and improvements to the snack bar. A "green room" (a space for actors preparing to go on stage) was also among the additions. Ms. Gage noted that when the Players' patio was completed in 1967, segments of patio slab were offered to donors, who could inscribe messages of their choice. Many of the inscriptions in the patio slab help tell the history of the Players. Messages dated well after 1967, suggest this method of fund raising was used later as well.

B10 Significance

By the mid-1970s, the land on which the Players' building stood changed hands from the City of Riverside to Riverside Community Hospital. The hospital gained title to the land via a 1970s era land trade with the City of Riverside in which the Evans Athletic Park lands were swapped for 40-plus-acres of former dairy property to the west between Tequesquite and Palm Avenues. (*Riverside Daily Enterprise,* 3-30-1976: D-1) In 1989, the hospital notified the players that in 1993, the year the Players lease was scheduled to expire, there would be no lease extension, as the hospital felt the land would be needed for its rapidly expanding campus. In 1993, the Players formed an advisory board to find a new location, raise funds for needed building improvements, and coordinate the anticipated move. The board was modeled after the advisory board created to foster the Players move to the Fourteenth Street site in the early 1950s. (*Riverside Press Enterprise,* 2-8-1993)

To help assure a smooth transition, the hospital allowed the Players to remain in the Fourteenth Street playhouse on a season-to-season basis beyond 1993, as long as the group showed that it was serious in searching for a replacement for its 198-seat theater. By early 1993 feasibility studies had been completed, examining three alternatives sites. One potential site was the old Imperial Hardware building on the east side of Main Street, between University and Mission Inn Avenues. Another potential site was located in the Tequesquite Arroyo behind the All Saints Episcopal Church northwest of Magnolia Avenue and Terracina Drive. The final site examined was the old Barker Brothers Furniture store at the southwest corner of Central and De Anza Avenues. It was the goal of the Players to create a 300-seat theater with a "flexible thrust stage", climate control, and computer controlled audio and visual systems (Ibid) The group favored the Imperial Hardware location, but the near $1 million needed to do a seismic retrofit proved a serious stumbling block. (*Riverside Press Enterprise,* 1-12-1994) The arroyo location presented the problem of improving an access road to the isolated property.

In 1995, the Players' search for a new home came to a happy ending, when Riverside Community Hospital agreed to sell to the Players the Fourteenth Street property on which the existing theater was located. The sale was consummated on October 4,1995 at the playhouse. Commenting on the event, Michael Charles, head of the Players' building search committee remarked: "This is the most exciting moment...in my 30-odd years as a member. We're finally having a home; after 70-years, we have a piece of land." The deal included $300,000 of Community Players cash, $142,000 in roadway improvements by the City of Riverside, and $50,000 for exterior theater improvements from the City of Riverside Redevelopment Agency. (*Riverside Press Enterprise,* 10-5-1995)

b. Historic Significance

The Riverside Community Players theater appears to be eligible for designation as a City of Riverside Structure of Merit, earning it a CHR Status Code of 5S3. (Appears to be individually eligible for local listing or designation through survey evaluation) It does not appear eligible, however, for local

CONTINUATION SHEET

B10 Significance

Landmark designation or listing on either the State Register of Historical Resources of the National Register of Historic Places.

The Riverside Community Players building has been surveyed three times in the past, but none of these surveys was accomplished at an intensive level. The following is a summary of these surveys:

1977: This undated survey was completed c. 1977 by volunteers supervised by Charles Hall Page & Associates, Inc. The Page survey was the City's earliest historical survey accomplished at a time when uniform standards for evaluating historical resources were in their infancy. While it records the basic resource, it makes no conclusion regarding its eligibility for historical designation.

1992: In 1992, the theater was surveyed by AEGIS, however, the survey was very sparse, offering very little in the way of information. The only reference to historical significance on the computerized form generated for this survey was the statement "There is no historic structure on this site."

2003: In 2003, the theater was again surveyed as part of the City's effort to product a new Downtown Specific Plan. This reconnaissance level survey resulted in a "6Z" California Historical Resources Status Code, signifying a determination that it did not appear eligible for historic listing at any level. This determination appears to have been founded on the incorrect assumption that it was built in 1956 and was, at that time, less than 50-years-old. An examination of the building permit file for the theater revealed that there was no copy of the original 1953 building permit. There was, however, a copy of a septic tank permit with a 1953 date on it, confirming that an official action had been taken that year to supply waste disposal facilities for the building. The 2003 survey was also based largely on architectural significance, something the building lacks due to numerous additions that are unsympathetic to the original Ruhnau design.

The present survey, conducted at an intensive level, comes to a different conclusion regarding the property's significance. Its qualification for designation as a City of Riverside Structure of Merit is based upon Criterion 4 which reads as follows:

4. A Cultural Resource that could be eligible under Landmark Criteria no longer exhibiting a high level of integrity, however, retaining sufficient integrity to convey significance under one or more of the Landmark Criteria;

The City of Riverside Landmark Criterion under which the Community Players property would qualify if its architecture hadn't been compromised by later additions is as follows:

B10 Significance

1. Exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, architectural, or natural history;

Clearly, the Riverside Community Players property's eligibility for designation as a local Structure of Merit is its significance as a cultural institution, not the present state of the architecture of the group's building. Nonetheless, even for the property to qualify for cultural significance the building must retain sufficient architectural integrity to express its historic context. In other words, a person familiar with the building when it was built should be able to clearly recognize the original building in relation to its later additions. In this regard, the Community Players building does retain sufficient integrity to pass this test. Nonetheless, the scale and nature of the alterations do significantly detract from the building's original architectural expression and, therefore, the building does not retain sufficient integrity to qualify for designation as a local Landmark or for listing on the State or National Registers.

Particularly detrimental to the architectural integrity of the building are the additions to the west, south, and east that are characterized by shed roofs. These are completely out of character with the more rectangular theme of the Ruhnau Modern design. In regard to the negative effects of the shed-roof alterations, WHS notes that a sense of architectural integrity could be regained with a well-executed remodel that would remove the shed roofs in favor of a design with flat roofs and canopies. An architect competent in Modern Architecture and architectural preservation could execute such a design alteration to the significant benefit of the building and its symbol as one of Riverside's most revered cultural institutions.

In support of the assertion that the Players is a significant cultural institution, WHS notes that the Players organization is the oldest theatrical group in the City of Riverside, having succeeded in producing plays every year since the first plays were presented under the auspices of the Women's Club in 1925. The importance of this group to the quality of Riverside's cultural expression cannot be underestimated. As for the use of its present location as a central symbol of the Players, WHS notes that while the group has used a number of venues for its performances since 1925, the approximately 60 years during which the current theater building has been in use gives it the status as the singular symbol of the Riverside Community Players.

WHS found several assertions that the Riverside Community Players is *the oldest amateur theatrical group in the nation with a record of continuous operation* but this appears to be unfounded. A typical example of such a statement appeared in the *Riverside Daily Press* issue of June 15, 1958 where the paper stated that the "Players have established a record of 33 continuous playing seasons, using only amateur performers and depending entirely on community support, since they began in 1925. This is a record unsurpassed by any similar group in the nation." *(Riverside Daily*

B10 Significance

Press, 6-15-1958) A simple internet search conducted by WHS uncovered other theaters with similar claims, including some with founding dates preceding 1925. Therefore while it would be fair to say the Riverside Community Players is *among* the oldest amateur theaters in the nation with a record of year-in-and-year-out productions, it does not appear to be *the oldest* in the nation. There is no doubt, however, that it is the oldest in the City of Riverside and likely well beyond the City's boundaries.

The following additional information pertains to this building:

- **Period of Significance:** 1925 through the present, the period during which the Fourteenth Street theater has been in use.
- **Significance Theme:** Riverside live theater.
- **Contributors:**

  √ Core Ruhnau building
  √ Patio including slabs with inscriptions.

- **Character Defining Features:**

  √ Smooth stucco finish of the core Ruhnau building.
  √ All original windows and doors.
  √ Original sheet metal fascias associated with the Ruhnau design.
  √ Flat roofed and open canopies of the west and north elevations.
  √ Stack bond brick wing walls of the west and north elevations.
  √ Tongue and groove vertical siding associated with the Ruhnau design.

B12 References

Books, Periodicals, and Web Sites

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Patricia Brenes, City of Riverside Principal Planner
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Tanya Sorrell, Architectural Historian
Matt Byrum, Perkins + Will Architects
Jose Torres, Riverside Community Hospital
Katheryn Gage, President of Riverside Community Players

APPENDIX E

Hazards Report

Phase I Environmental Site Assessment
Riverside Community Hospital
4445 Magnolia Avenue, 4000 14th Street, and 4500 Brockton Avenue
Riverside, California 92501

Assessor's Parcel Numbers
217-070-027, 217-300-009, 217-300-011, 217-300-014, and 217-300-018

Prepared for: City of Riverside
3900 Main Street
Riverside, CA 92522

Prepared by: DUDEK
605 Third Street
Encinitas, CA 92024

REGISTERED PROFESSIONAL ENGINEER
NICOLE PEACOCK
C 68775
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CIVIL
STATE OF CALIFORNIA

Nicole Peacock, P.E., P.G.
Senior Environmental Engineer

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Geologist

July 2013

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1. Executive Summary

A Phase I Environmental Site Assessment (ESA) was conducted of the approximately 18.4-acre portion of the site associated with the Riverside Community Hospital (RCH) Expansion Project Specific Plan located at 4445 Magnolia Avenue, 4000 14th Street, and 4500 Brockton Avenue (Assessor's Parcel Numbers [APNs] 217-070-027, 217-300-009, 217-300-011, 217-300-014, and 217-300-018) in Riverside, California (subject property, Figures 1 and 2). The subject property is currently built out as paved parking lots and medical offices/buildings associated with RCH.

The findings of this investigation are based upon a review of historical source information, a radius search performed by Environmental Data Resources, Inc. (EDR), interviews, and a site reconnaissance.

Information gathered for this report indicated the following:

- Based on the site interview, historical aerial photographs, and topographic maps, the northeastern portion of subject property has been used as a hospital since 1925. Previous uses in the remainder of the subject property appeared to be vacant land and sports fields. The subject property is currently used as a hospital, medical office buildings, parking structures, and associated parking lots.
- Adjacent properties consist of a school, community theater, gas stations, automobile repair, medical offices, and miscellaneous commercial properties.
- Five underground storage tanks (USTs) were previously located at the subject property (one 120-gallon leaded gasoline, one 280-gallon leaded gasoline, one 1,000-gallon diesel, one 3,000-gallon diesel, and one 6,000-gallon diesel). Petroleum-impacted soil was identified in the UST area and was excavated and removed. Residual contamination remains in the area of the former USTs, under the main hospital building. Four of the five USTs were removed and one was closed in place. The County of Riverside Department of Environmental Health issued a No Further Action letter for the five USTs located at 4445 Magnolia Avenue in September 1989. One current diesel UST associated with the backup generators is currently operational. The current and former UST area is shown on Figure 2.
- Based on an interview with a facilities employee during the site visit, a release of hydraulic oil (unknown polychlorinated biphenyl [PCB] content) occurred in the subsurface several years ago due to a cracked hydraulic cylinder associated with the northernmost parking structure elevator.
- Based on the review of the EDR report, it is likely that at least one off-site property has impacted the environmental conditions at the subject property (northeast area and western area).

Based on these findings, recognized environmental conditions were identified that may adversely affect the subject property. Dudek recommends that a subsurface soil and soil

vapor investigation be conducted prior to the commencement of construction activities in the north, northeast, and western portions of the subject property. Additionally, Dudek recommends investigation of the soil in the area of the hydraulic oil release by the parking structure elevator. Dudek also recommends that air monitoring for volatile organic compounds (VOCs) be conducted during subsurface work at the RCH.

Dudek also recommends that a lead-based paint and asbestos survey be conducted prior to the demolition of structures on the subject property. Should lead-based paint or asbestos-containing materials be identified during survey, abatement should be conducted according to local, state, and federal guidelines.

2. Introduction

This Phase I Environmental Site Assessment was performed according to the guidelines stipulated in the American Society for Testing and Materials Standard E 1527-05, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process". The subject property is located at 4445 Magnolia Avenue, 4000 14th Street, and 4500 Brockton Avenue within APNs 217-070-027, 217-300-009, 217-300-011, 217-300-014, and 217-300-018 in Riverside, California. This Phase I ESA is being conducted in order to satisfy California Environmental Quality Act (CEQA) requirements prior to the initiation of the RCH Expansion Project Specific Plan.

2.1. Assessment Procedure and Scope of Investigation

Phase I Environmental Site Assessments assist in identifying past and present land use, including identification of possible on-site releases or disposal of manufacturing or other wastes if such information is contained within regulatory reports, files, and/or is currently visible on-site. The assessment reviews Local, County, State, and U.S. Environmental Protection Agency lists of known or potentially hazardous waste sites, landfills, and sites currently under investigation for environmental violations that may be of concern to this site.

The scope of the environmental investigation consisted of: 1) a reconnaissance of the subject property; 2) a computerized database search of regulatory agency records; 3) a review of available historical aerial photographs, topographic maps, Sanborn fire insurance maps, and City Directory listings; 4) an interview with a property representative; and 5) the preparation of this Phase I Environmental Site Assessment Report detailing the findings of the investigation.

These activities were conducted in order to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products on the subject property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into the ground, groundwater, or surface water on the subject property.

The term recognized environmental condition is not intended to include *de minimus* conditions. *De minimus* conditions are conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

2.2 Qualifications of Environmental Professionals

The Phase I ESA was conducted under the supervision of Nicole Peacock, a Professional Engineer with over 13 years of relevant experience (Appendix A).

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental professionals as defined in Section 312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

3. Site Location

The subject property consists of approximately 18.4 acres of land located within APNs 217-070-027, 217-300-009, 217-300-018, 217-300-011, and 217-300-014, in Riverside, California. The subject property is bordered by 14th Street to the north, Brockton Avenue to the west, Magnolia Avenue to the east, and Tequesquite Avenue to the south. The subject property consists of a hospital, medical office buildings, parking structures, and associated parking lots (Figure 2). Adjacent parcels that are included in the Specific Plan area, but are not included in this Phase I ESA are shown on Figure 2 and discussed briefly in Section 11.5.

4. Environmental Setting

General topographic information for the subject property and the surrounding area was obtained from a review of a USGS topographic map for Riverside West, California, from the EDR report (Appendix B), from Google Earth and from the site visit. The topography of the subject property is characterized by an overall southwesterly sloping gradient. The elevation of the subject property is approximately 790 to 830 feet above mean sea level (Appendix B).

Storm water on the northeastern portion of the subject property would drain to the northeast onto 14th Street and toward the southeast onto Magnolia Avenue. Storm water on the remainder of the subject property would drain toward the west and then toward the southwest.

No subsurface geologic investigations were performed as part of the Phase I ESA. According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the soils on the subject property consist of loam, sandy loam, fine and coarse sandy loam, silty clay loam, and cemented fine-grained units.

Twenty wells were mapped within one mile of the subject property. Well information was provided by USGS as well as State databases. Two wells are located between $^{1}/_{8}$ and ¼ mile from the site. Depth to groundwater was reported for the well located between $^{1}/_{8}$ and ¼ mile east-northeast of the site to be between 59.29 feet and 65.94 feet. Direction of groundwater flow at this well is reported to be to the southwest.

5. Interviews

5.1. Site Representative Interview

On May 22, 2013, Susie Smith of Dudek provided an interview questionnaire to Jose Torres, Facilities Manager at Riverside Community Hospital. On May 22, 2013 Mr. Torres provided responses as the subject property representative.

Mr. Torres stated that there are multiple structures on the property. The property was first developed as a hospital and medical center in 1925. He stated that the subject property has not been used for industrial activities but an auto repair shop is located to the west. Mr. Torres stated that chemicals stored on the subject property include diesel fuel; the quantity and disposition of other hazardous chemicals were not known.

Mr. Torres stated that he thought the subject property has been included in other environmental assessments including a Phase I ESA and asbestos and lead-based paint surveys; however, he did not have any copies of these reports available for review. Mr. Torres indicated that at least one underground storage tank used to store diesel fuel is located on the northeastern portion of the subject property, just south of 14th Street (Figure 2). Mr. Torres indicated that no known environmental conditions have existed on the subject property. Mr. Torres stated that to his knowledge there are no septic tanks on the subject property.

Based on the responses to the questionnaire, Mr. Torres is not aware of adverse environmental conditions on the subject property.

5.2. User-Provided Information

In accordance with ASTM Standard 1527-05, Dudek posed the following questions to the user of this Phase I ESA, Riverside Community Hospital. Mr. Jose Torres, Facilities Manager for Riverside Community Hospital, provided the following answers.

1) Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

Not aware

2) Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

No

3) As the user of this ESA, do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No specialized knowledge

4) If the purchase price of the subject property was below fair market value, did this occur because contamination was/is known or believed to be present at the property?

N/A

5) Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?

No

6) As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

No

5.3. Agency Interview

Dudek submitted requests to review records for the following addresses associated with the subject property: 4445 Magnolia Avenue, 4500 Brockton Avenue, 4000 14th Street. The agency responses are described in the sections below.

5.3.1. Riverside County Department of Environmental Health

Dudek contacted the County of Riverside Department of Environmental Health (DEH) requesting information on the subject property: Dudek reviewed the DEH records on May 29, 2013. The records indicated that 5 USTs were previously located at the property (one 120-gallon leaded gasoline, one 280-gallon leaded gasoline, one 1,000-gallon diesel, one 3,000-gallon diesel, and one 6,000-gallon diesel). The former USTs were located in the northern portion of the subject property (Figure 2). The two leaded gasoline and 1,000-gallon diesel tanks were removed from the site in 1988. Soil beneath the 120-gallon leaded gasoline tank was impacted and subsequently 15 cubic yards of soil were excavated and disposed. The 3,000-gallon diesel UST was removed from the site in June 1989. Impacted soil was discovered and 300 cubic yards of soil were excavated and disposed. Additional petroleum hydrocarbon-impacted soil was reportedly left in

place due to the threat of undermining the structural integrity of the adjacent hospital buildings. A release was observed in the vicinity of the 6,000-gallon diesel tank in 1987. This tank is located beneath the hospital loading dock and was abandoned in place in June 1989 due to the proximity of hospital structures. Soil samples collected in May 1989 from angle borings beneath the 6,000-gallon tank did not contain detectable concentrations of petroleum hydrocarbons. The County of Riverside Department of Environmental Health issued a No Further Action letter for the five USTs located at 4445 Magnolia Avenue in September 1989 (Appendix C).

5.3.2. Riverside County Transportation and Land Management Agency – Planning Department

Dudek accessed the Riverside County Transportation and Land Management Agency (TLMA) online database on May 28, 2013 to obtain information regarding permits and code violations for the subject property. Inquiries did not yield permits or code violations for the parcels associated with the subject property. A copy of TLMA search records are presented in Appendix C.

5.3.3. Santa Ana Regional Water Quality Control Board

Dudek contacted the Santa Ana Regional Water Quality Control Board (RWQCB) on May 28 and June 5, 2013 to obtain information about potential spills, tanks, or other releases on the subject property. Dudek received responses on May 29 and June 5, 2013 that the RWQCB did not have records for the subject property. A copy of the RWQCB responses is presented in Appendix C.

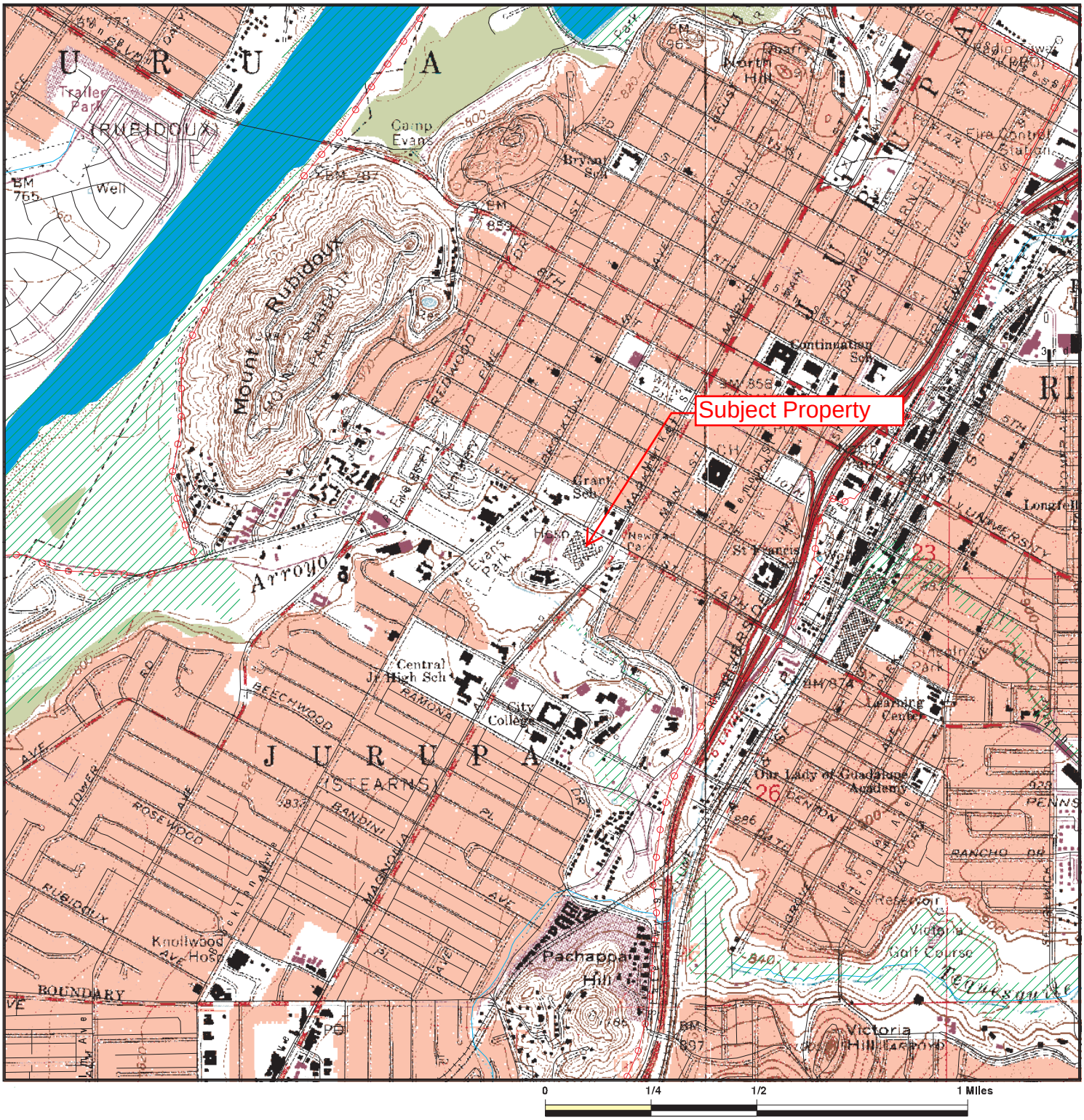
5.3.4. City of Riverside Fire Department

Dudek contacted the City of Riverside Fire Department on May 28, 2013 to obtain information about potential spills, tanks, releases, hazardous materials and plans, and hazardous materials responses on the subject property. The City or Riverside Fire Department responded on June 20, 2013 with a copy of a Hazardous Materials Business Emergency Plan (HMBEP) for 4445 Magnolia Avenue. The HMBEP is discussed in Section 11.5 and presented in Appendix C. No records were available for 4000 14th Street or 4500 Brockton Avenue. Additionally, no violations were noted for any of the addresses searched. A copy of the response is presented in Appendix C.

6. Site Reconnaissance

A site reconnaissance was conducted on May 22, 2013 by Susie Smith of Dudek. The site reconnaissance consisted of walking the site, taking notes on observations, and taking photographs. Photographs are presented in Appendix D. A RCH facilities employee escorted Ms. Smith to chemical storage areas at the hospital.

Figure 1 - Regional Map



SITE NAME:	Riverside Community Hospital
ADDRESS:	4445 Magnolia Avenue Riverside CA 92506
LAT/LONG:	33.9765 / 117.3823

The subject property currently consists of several connected and free-standing buildings (hospital and medical offices), a parking structure, asphalt parking lots, and a parking structure currently under construction (Photographs 1 to 5). The subject property is bordered to the north by a community theater and medical office building, to the northeast by 14th Street and school, and to the northwest by medical office building, a restaurant, and auto repair shop (Photographs 6 to 11). The subject property is bordered to the east by a vacant lot and gas station (Photographs 12 and 13) and to the southeast by Magnolia Avenue then a sports medicine complex (Photograph 14). The subject property is bordered to the west-northwest by a medical office building and vacant lot (Photographs 15 and 16). The subject property is bordered to the south by a church, sport fields, and a medical office building (Photographs 17 to 19).

Building A is located in the eastern corner of the subject property. The building consists of two floors – a main floor and a basement. The main floor is used as a tissue laboratory and medical offices (Photographs 20 and 21). The basement is used to store medical records and other miscellaneous items (Photographs 22 and 23). The elevator room is located in the basement and contains the hydraulic reservoir (Photograph 24). A transformer is located in the basement adjacent to the medical records room (Photograph 25).

Building N is a multi-story medical office building located near the center of the subject property and is connected to the hospital facility by a pedestrian bridge (Photograph 26). Transformers were observed in electrical control rooms on the first and second floors; additional transformers were observed in the MRI Computer Room (Photographs 27 and 28). A mechanical elevator room was observed on the rooftop level of the building (Photograph 29). Boilers and air handlers are also located on the rooftop level of the building (Photograph 30 and 31). Minor stained asphalt was observed in the parking lot located to the west of Building N (Photograph 32).

The parking structure is a 4-story (3 stories plus rooftop parking) structure located south-southwest of Building N (Photographs 4 and 33). A fenced waste storage area is located in the parking structure on the southern side (Photograph 34). Two unlabeled 55-gallon drums were observed within the fenced waste storage area along with red bags and bins labeled “biohazard” (Photographs 35). An equipment storage area was observed in the northeast corner of the parking structure; the equipment stored included hospital beds and other miscellaneous hospital equipment (Photograph 36). Two hydraulic elevators, only one operational, service the parking structure (Photograph 37). According to the facilities employee escorting Ms. Smith, the northernmost parking structure elevator became inoperable several years ago due to a subsurface leak in the hydraulic cylinder. Minor staining was observed in both of the parking structure elevator rooms (Photograph 37). Minor stained parking surfaces were observed in the parking structure (Photograph 38).

Wetlands and Natural Waterways

No wetlands or natural waterways were observed on the subject property.

Surface Water Discharge
Storm water north of Building A drains toward the northeast onto 14th Street. Storm water east of Building A drains toward the southeast and southwest onto Magnolia Avenue. Storm water from Building N, Building N parking lot, and the parking structure generally drains toward the west and then toward the southwest. There are several grated drains located adjacent to Building N and the parking structure (Photograph 39). Concrete swales in the Building N parking lot channel storm water toward the west and then southwest (Photograph 26).

Distressed Vegetation
No distressed vegetation was observed on the subject property.

Indications of Solid Debris Storage
No solid debris was observed on the subject property.

Chemical Storage or Use
Chemicals stored on the subject property consist of diesel fuel and hydraulic oil. A hazardous materials storage area is located in the northeast portion of the subject property, east of the diesel UST (Photograph 40; Figure 2). Small quantities of chemicals are stored throughout the hospital facility.

Unnaturally Discolored Ponds or Flowing Waters
No unnaturally discolored pools or flowing water were observed on the subject property.

Groundwater Wells, Cisterns, Cesspools or Septic Tanks
No wells were observed on the subject property.

Sumps
No sumps were observed on the subject property.

Transformers
Several transformers were observed throughout the subject property but no staining was observed (Photographs 25, 27, and 28).

Abnormal Odor
Dudek did not notice any abnormal odors on the subject property.

Soil Disturbances
Disturbed soil was observed in the western portion of the subject property in the vicinity of the parking structure under construction (Photograph 41). No other soil disturbances were observed.

Asbestos and Lead-Based Paint
Based on the age of the buildings, it is possible that asbestos-containing materials and lead-based paint are present (Photographs 23, 42, and 43). A survey for these materials should be conducted prior to demolition of any structures.

Figure 2 - Site Map

Storage Tanks
A 10,000-gallon diesel UST fueling the backup generators was observed in the northeastern portion of the subject property, just south of 14th Street (Figure 2; Photograph 44). No other tanks were observed on the subject property.

7. Review of Historical Aerial Photographs

Dudek reviewed historical aerial photographs from EDR for the years 1931, 1938, 1948, 1953, 1967, 1977, 1989, 1994, 2005, 2006, 2009, 2010, and 2012 (Appendix E). The photographs provided background information needed to assess the possibility of historical activities that could present environmental concerns.

The aerial photographs are described in the following table:

Date	Description
1931	A large structure is present in the eastern portion of the subject property. Two small structures are present along the northern portion of the property. The remainder of the property appears to be undeveloped land. The surrounding land in downtown Riverside appears developed. Paved roads bound the site to the north, east and west.
1938	A large structure is present in the eastern portion of the subject property. What appears to be a sports field is present on the southwestern portion of the subject property. A structure is present to the south and to the northwest of the subject property.
1948	The subject property and remainder of the surrounding properties appear similar to the 1938 aerial photograph.
1953	The large structure present in the eastern portion of the subject property appears to have been expanded. Several new structures appear west of the subject property. The remainder of the subject property and the surrounding properties appear similar to the 1948 aerial photograph.
1967	The previous undeveloped land on the subject property is developed as paved parking. The sports field is still present on the southwestern portion of the subject property. The large structure present in the eastern portion of the subject property appears to have been further expanded. The structure to the south of the subject property also appears to have been expanded.
1977	A new structure appears in the center of the subject property. The remainder of the subject property and surrounding properties appear similar to the 1967 aerial photograph.
1989	The structures located in the eastern and central portions of the subject property have been further expanded and merged together. The sports field previously present in the southwestern portion of the subject property appears to have been converted into a paved lot. Several sports fields appear to the south of the subject property.

1994	The extent of paved lots and structures on the subject property appear similar to the 1989 aerial photograph.
2005	A new structure appears on the northern portion of the subject property. A paved lot appears on the southern portion of the subject property. A structure is located to the southwest of the subject property. The remainder of the subject property and surrounding properties appear similar to the 1994 aerial photograph.
2006	The subject property and surrounding properties appear unchanged from the 2005 aerial photograph.
2009	The subject property and surrounding properties appear unchanged from the 2006 aerial photograph.
2010	The subject property and surrounding properties appear unchanged from the 2009 aerial photograph.
2012	The subject property and surrounding properties appear unchanged from the 2010 aerial photograph.

8. Review of Historical Topographic Maps

Historical topographic maps were obtained from EDR. Historical topographic maps are another historical source that can be used to document the prior use of the subject property and surrounding area. Topographic maps from 1901, 1942, 1947, 1953, 1967, 1973 and 1980 were reviewed (Appendix F).

The topographic maps show the following:

Date	Scale	Description
1901	1:62,500, 1:125,000, 1:250,000	The area surrounding the subject property is shown as developed with residences and roads.
1942	1:31,680	The density of the development surrounding subject property appears to increase from the 1901 topographic map. There appears to be several additional major roads in the vicinity of the subject property. The structure on the subject property is shown on this topographic map.
1947	1:50,000	The subject property and the surrounding area appears unchanged from the 1942 topo; however, the network of roads in southern Riverside appears to have improved.
1953	1:24,000	The subject property and surrounding property appears similar to the 1947 topographic map. The structure on the subject property is shown on this topographic map.
1967	1:24,000	The subject property appears similar to the 1953 topographic map. There appear to be additional structures in the area surrounding the subject property.

1973	1:24,000	This topographic map is photorevised from the 1967 topographic map. The subject property appears similar to the 1967 topographic map.
1980	1:24,000	This topographic map is photorevised from the 1967 topographic map. There appears to be an additional structure on or in the vicinity of the subject property. The area surrounding the subject property appears similar to the 1967 topographic map.

9. Review of Sanborn Maps and City Directory Listings

Historical Sanborn fire insurance maps and city directory listings were requested from EDR. Sanborn maps and city directories provide information regarding the historical uses of the subject property and surrounding properties.

The Sanborn Map Report provides maps for the subject property for the following dates: 1908, 1950, 1952, 1953, 1954, 1955, 1958, 1959, 1960, 1961, 1962, 1965, 1968 and 1969 (Appendix G). The Sanborn Maps are described in the following table:

Date	Description
1908	The subject property is partially visible. Several smaller structures are noted adjacent to the eastern portion of the property. Additionally, a sports field is noted on the property. Surrounding structures include residences and a laundry business.
1950	The Riverside Community Hospital building is noted in the Sanborn map on the subject property. The several small structures adjacent to the subject property and the sports field present in the 1908 Sanborn are still present. One of the small structures adjacent to the eastern portion of the subject property is now labeled Gas & Oil, Auto Rep. The adjacent laundry business notes the presence of an underground 10,000 gallon crude oil tank. In addition, a church is noted approximately 200 feet south of the subject property.
1952	This Sanborn map appears similar to the 1950 map.
1953	This Sanborn map appears similar to the 1952 map.
1954	This Sanborn map appears similar to the 1953 map.
1955	This Sanborn map appears similar to the 1954 map.
1957	A new structure appears adjacent to the subject property, labeled Community Play Ho. The remainder of the subject property appears unchanged.
1958	This Sanborn map appears similar to the 1957 map.
1959	The RCH building appears to have been expanded. The remainder of the subject property appears similar to the 1958 map. A machine shop is present to the west of the subject property. This machine shop is located within the adjacent properties that are part of the Riverside Community Hospital Specific Plan Area (Appendix H).
1960	This Sanborn map appears similar to the 1959 map.

1961	This Sanborn map appears similar to the 1960 map.
1962	This Sanborn map appears similar to the 1961 map.
1965	The RCH building appears to have been further extended. The church building adjoining the subject property to the south appears to have been extended. The remainder of the subject property appears unchanged.
1968	The laundry business which had the 10,000 gallon underground oil tank located adjacent to the subject property to the west has been replaced by four office buildings. Additionally, the southwestern portion of the RCH building does not appear on this Sanborn map.
1969	This Sanborn map appears similar to the 1968 map.

The City Directory Report provides a list of addresses associated with the subject property and adjoining properties from 1921 through 2012 (Appendix G). Listed uses associated with the subject property indicate medical professional use (from 1930 to 2012) and use as a ball park (from 1936 to 1955). Listed uses associated with adjoining properties include but are not limited to: liquor stores, window tinting and audio businesses, real estate brokers, barber shops, Harley Davidson motorcycles, gas station, auto repair, florists, roofing contractor, bail bond business, upholstery, vacuum cleaner service, school facilities, car wash, pest control, animal feed store, bakery, dry cleaners and residential use.

10. Site History

The site history is based on the interview and a review of historical aerial photographs topographic maps, Sanborn maps, and the City Directory listings. The southern portion of the subject property appears to have been developed as a sports field prior to 1908. Portions of the subject property appear to have been developed as a hospital from 1925 to the present. By 1989, the majority of the property had been developed and by 2005, the subject property consisted of paved parking or structures used by the hospital and medical offices.

Adjacent properties have consisted of vacant, undeveloped land, sports fields, business (including dry cleaners, auto shops, and machine shops) and residential structures and public roads.

11. Public Agency Records Search Review

The regulatory database gives a listing of sites, within an approximately one-mile radius of the subject property, which are known to be chemical handlers, hazardous waste generators, or polluters. Information in these listings includes the location of the site relative to the subject property, sources of pollution, and the status of the site. The search performed for this assessment was conducted in May 2013 by EDR. The complete database search report is included as Appendix B.

The subject property was listed in nine of the databases searched by EDR in the Radius Report: HAZNET, LUST, UST, SWEEPS UST, EMI, FINDS, HIST CORTESE, CA FID UST, and RCRA-SQG. The LUST and HIST CORTESE database listings identify sites that potentially had an unauthorized release. The target property database listings are discussed in detail in Section 11.5.

126 individual sites within the specified search distances were identified in the database search. Many of the sites had multiple entries or different names for their particular sites addresses. Sites reported in Sections 11.1, 11.2, and 11.3 are combined by address listing. The following sections describe which databases were searched and how many facilities were identified within those databases:

11.1. U.S. Environmental Protection Agency (EPA) Federal Sources

The following computer databases were included in this search:

ACRONYM	DATABASE	SEARCH DISTANCE
NPL	National Priorities List (including proposed NPL sites)	1 mile
Proposed NPL	Proposed National Priority List Sites	1 mile
Delisted NPL	National Priority List Deletions	1 mile
NPL LIENS	Federal Superfund Liens	Target Property
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)	0.5 mile
CERC-NFRAP	CERCLIS No Further Remedial Action Planned	0.5 mile
ENF	Enforcement Action Listing	Target Property
CORRACTS	Resource Conservation and Recovery Act (RCRA) Corrective Action	1 mile
RCRA TSDF	RCRA - Transportation, Storage, and Disposal	0.5 mile
RCRA-SQG	RCRA-Small Quantity Generators	0.25 mile
RCRA-LQG	RCRA-Large Quantity Generators	0.25 mile
RCRA- NonGen	RCRA Nongenerators	0.25 mile
ERNS	Emergency Response Notification System of spills	Target Property
HMIRS	Hazardous Materials Information Reporting System	Target Property

ACRONYM	DATABASE	SEARCH DISTANCE
US ENG CONTROLS	Sites with Engineering Controls	0.5 mile
US INST CONTROLS	Sites with Institutional Controls	0.5 mile
DOD	Department of Defense Sites	1 mile
FUDS	Formerly Used Defense Sites	1 mile
US BROWNFIELDS	A Listing of Brownfields Sites	0.5 mile
CONSENT	Superfund (CERCLA) Consent Decrees	1 mile
ROD	Record of Decision	1 mile
UMTRA	Uranium Mill Tailings Sites	0.5 mile
ODI	Open Dump Inventory	0.5 mile
TRIS	Toxic Release Inventory Database	Target Property
TSCA	Toxic Substance Control Act	Target Property
FTTS	Federal Insecticide, Fungicide, & Rodenticide Act/TSCA Tracking System	Target Property
SSTS	Section 7 Tracking Systems	Target Property
ICIS	Integrated Compliance Information System	Target Property
US CDL	Clandestine Drug Lab Locations	Target Property
LUCIS	Land Use Control Information System for former Navy base realignment and closure properties	0.5 mile
RADINFO	Radiation Information Database	Target Property
PADS	PCB Activity Database System	Target Property
MLTS	Material Licensing Tracking System	Target Property
RMP	Risk Management Plan	Target Property
US MINES	Mines Master Index File	0.25 mile
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report	Target Property
RAATS	RCRA Administrative Action Tracking System	Target Property
LIENS2	CERCLA Lien Information	Target Property
DOT OPS	Department of Transportation, Office of Pipeline Safety Incident and Accident database	Target Property
US HIST CDL	National Clandestine Laboratory Register	Target Property

ACRONYM	DATABASE	SEARCH DISTANCE
RCRA-CESQG	RCRA – Conditionally Exempt Small Quantity Generators	0.25 mile
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Target Property
US AIRS	Aerometric Information Retrieval System Facility Subsystem	Target Property
PRP	Potentially Responsible Parties	Target Property
2020 COR ACTION	2020 Corrective Action Program List	0.25 mile
LEAD SMELTERS	Lead Smelter Sites	Target Property
EPA WATCH LIST	EPA Watch List	Target Property
FEDERAL FACILITY	Federal Facility Site Information Listing	1 mile
COAL ASH DOE	Steam-Electric Plan Operation Data	Target Property
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	0.5 mile
PCB TRANSFORMER	PBC Transformer Registration Database	Target Property
SPILLS 90	SPILLS 90 data from Firstsearch	Target Property
US FIN ASSUR	Financial Assurance Information	Target Property

The subject property was listed in two of the federal database records searched by EDR: FINDS and RCRA-SQG. The subject property is discussed in detail in Section 11.5.

In addition to the subject property, 69 sites were identified in Federal databases within one mile of the subject property; 12 of these sites were also identified in the State databases; these sites are discussed in the State databases Section 11.2. The remaining facilities are discussed below:

- Forty-nine sites were listed on the US Brownfields and FINDS databases. The site descriptions indicated that the listings were due to the completion of a Phase I Environmental Assessment at these sites. The listings do not indicate a release occurred at the sites.
    - 3781, 3775, 3785 and 3779 14th Street, located less than 1/8 mile east-northeast of the subject property.
    - 3858 and 3874 13th Street, located less than 1/8 mile northeast of the subject property.
    - 3890, 3891, and 3855 11th Street, located between 1/8 and ¼ mile northeast of the subject property.
    - 3882, 3878, 3868, 3895, 3877, 3780, 3843, 3770 and 3760 12th Street, located between 1/8 and ¼ mile northeast of the subject property.

- 4166, 4060 and 4040 Almond Street, located between 1/8 and ½ mile northeast of the subject property.
- 4343, 4310, 4293, 4282, 4225, 4093, 4035 and 4019 Market Street, located from less than 1/8 mile to ½ mile of the subject property.
- 4353, 4329, 4307, 4295, 4281, 4267, 4261, 4255, 4229, 4213, 4075, 4049, 4015 and 4001 Main Street, located from less than 1/8 mile to ½ mile of the subject property.
- 3872, 3890, 3796, 3774, 3768 and 3760 10th Street, located between ½ and ¼ mile northeast of the subject property.

- Brockton Auto Clinic (also reported as Smith & Pattison) at 4468 Brockton Ave., located less than 1/8 mile northwest of the subject property. This site was listed on the RCRA-SQG, FINDS, and EDR HIST Auto Stat databases. The site description did not indicate that a release has occurred at the site.
- 4398 and 4380 Market Street, located from less than 1/8 mile to ½ mile east-northeast of the subject property. These sites were listed on the US Brownfields, FINDS, and EDR HIST Auto Stat databases. The site descriptions indicated that the listings were due to the completion of a Phase I Environmental Assessment at these sites.
- 4344 and 4212 Market Street, located from less than 1/8 mile to ½ mile east-northeast of the subject property. These sites were listed on the US Brownfields, FINDS, EDR HIST Auto Stat, and EDR US Hist Cleaners databases. The site descriptions indicated that the listings were due to the completion of a Phase I Environmental Assessment at these sites.
- 3732 12th Street, located between 1/8 and ¼ mile east-northeast of the subject property. This site was listed on the Drycleaners, US Brownfields, FINDS, and EDR US Hist Cleaners databases. The site descriptions indicated that the listings were due to the use of the site as a drycleaner and the completion of a Phase I Environmental Assessment at these sites. The EDR entry reports a cleaners and laundry in 2001.
- Lewis P M Laboratories at 4121 Brockton Ave., located between 1/8 and ¼ mile north of the subject property. This site was listed on the RCRA-SQG and the FINDS databases.
- 3875 10th Street, located between 1/8 and ¼ mile northeast of the subject property. This site was listed on the US Brownfields FINDS, and EDR US Hist Auto Stat databases. The site descriptions indicated that the listings were due to the completion of a Phase I Environmental Assessment at these sites. The EDR entry reports an auto repair shop in 1936.

11.2. State Sources

The following computer databases were included in this search:

ACRONYM	DATABASE	SEARCH DISTANCE
Hist Cal-Sites	Calsites Database	1.0 mile
CA Bond Exp. Plan	Bond Expenditure Plan	1.0 mile
SCH	Proposed and Existing School Sites Being Evaluated By DTSC	0.25 mile
Toxic Pits	Toxic Pits Cleanup Facilities	1.0 mile
UIC	UIC Listing	Target Property
WMUDS/SWAT	Waste Management Unit Database/Solid Waste Assessment Test	0.5 mile
CORTESE	State Index of Properties with Hazardous Waste	0.5 mile
SWRCY	Recycling Facilities in California	0.5 mile
LUST	Leaking Underground Storage Tank	0.5 mile
CA FID UST	Facility Inventory Database	0.25 mile
SLIC	Statewide SLIC Cases	0.5 mile
UST	Registered Underground Storage Tanks, Including Tanks On Indian Land and Historic USTs	0.25 mile
HIST UST	Historic Underground Storage Tank	0.25 mile
AST	Registered Aboveground Storage Tanks	0.25 mile
SWEEPS UST	UST listing maintained by RWQCB in the 1980s	0.25 mile
CHMIRS	California Hazardous Waste Material Incident Report System	Target Property
Notify 65	Proposition 65	1.0 mile
DEED	Department of Health Services – Land Use and Air Assessment	0.5 mile
VCP	Voluntary Cleanup Program Properties	0.5 mile
DRYCLEANERS	Dry Cleaner Facilities	0.25 mile
WIP	Well Investigation Program Case List	0.25 mile
CDL	Clandestine Drug Labs	Target Property
LIENS	Environmental Liens in California where DTSC is the lien holder	Target Property
RESPONSE	State Response Sites	1.0 mile
HAZNET	Hazardous Waste Information System	Target Property
EMI	Emissions Inventory Data	Target Property
ENVIROSTOR	EnviroStor Database	1.0 mile
INDIAN RESERV	Indian Reservations	1.0 mile
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land	0.5 mile

ACRONYM	DATABASE	SEARCH DISTANCE
INDIAN UST	Underground Storage Tanks on Indian Land	0.25 mile
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	0.5 mile
INDIAN VCP	Voluntary Cleanup Priority Listing	0.5 mile
SWF/LF	Solid Waste Information System	0.5 mile
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	0.5 mile
HIST CORTESE	Hazardous Waste & Substances Site List	0.5 mile
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	0.5 mile
FEMA UST	Underground Storage Tank Listing	0.25 mile
HAULERS	Registered Waste Tire Haulers Listing	Target Property
NPDES	NPDES Permit Listing	Target Property
WDS	Waste Discharge System	Target Property
PROC	Certified Processors Database	0.5 mile
MWMP	Medical Waste Management Program Listing	0.25 mile
HWT	Registered Hazardous Waste Transporters Database	0.25 mile
FINANCIAL ASSURANCE	Financial Assurance Information Listing	Target Property
HWP	Envirostor Permitted Facilities Listing	1.0 mile
LDS	Land Disposal Sites Listing	Target Property
MCS	Military Cleanup Sites Listing	Target Property
CUPA Listings	CUPA Resources List	0.25 mile

The subject property was listed in seven of the state/local databases searched by EDR: LUST, HAZNET, UST, HIST CORTESE, SWEEPS UST, CA FID UST, and EMI. The subject property is discussed in detail in Section 11.5. In addition to the subject property, 30 facilities within the specified search distances were also identified in these state and local sources databases.

Fourteen of the 30 sites were listed in databases other than those that indicate a release has occurred at the site. As no release has been reported at these sites, it is unlikely that these sites have impacted the environmental conditions at the subject property; these sites are listed in the table below.

SITES WITH NO REPORTED RELEASE TO THE GROUND			
Site	Address	Distance from subject property	Database
Computerized Diagnostic Imagin	4646 Brockton Ave.	<1/8 mile WSW	RCRA-SQG, FINDS, HAZNET

British Sports and Imports	4489 Brockton Ave.	<1/8 mile WNW	RCRA-SQG, FINDS, HAZNET, EDR US Hist Auto Stat
Bud & Harry's Service/Bud & Harry's Friendly Service	4481 Brockton Ave.	<1/8 mile WNW	HIST UST, EDR US Hist Auto Stat
County Office of Education/Riverside County Office of Education	3939 13th Street	<1/8 mile NE	CA FID UST, SWEEPS UST, UST
Insta-Tune/Moore Clifford/Tucker JM/	4399 Main Street	<1/8 mile E	HIST UST, US BROWNFIELDS, EDR HIST Auto Stat, EDR US Hist Cleaners
Sherwin-Williams Co	4267 Market Street	<1/8 mile ENE	RCRA-SQG, FINDS, HAZNET, US Brownfields, FINDS
Firestone Stores #2768	4199 Market Street	1/8 – ¼ mile NE	CA FID UST, SWEEPS UST, HIST UST, US Brownfields, FINDS, EDR HIST Auto Stat
Riverside Monumental Co	4291 Cedar Street	1/8- ¼ mile NNW	HIST UST
Winston Tire/Peterson & Maine/Maine CE Service/PEA	4135 Market Street	1/8- ¼ mile NE	RCRA-SQG, HAZNET, US Brownfields, FINDS, EDR HIST Auto Stat, EDR US Hist Cleaners
County of Riverside Hall of Justice	4100 Main Street	1/8 – ¼ mile ENE	UST
Evergreen Cemetery Disposal	4414 14th Street	¼- ½ mile NW	WMUDS/SWAT, EMI
Fairfield Chemicals	3075 14th Street	¼ - ½ mile ESE	ENVIROSTOR
Stearns Downtown Liquor	4029 7th Street	½ - 1 mile NNE	Notify 65
Weiland and Company	3491 Commerce Street	½ - 1 mile ENE	ENVIROSTOR

Twelve of the 30 sites reported a release to soil and/or groundwater for which the investigation was closed by the lead regulatory agency. Although these cases have been closed, Dudek researched the sites closest to the subject property to determine whether these releases may have impacted the environmental conditions at the subject property. It is unlikely that these sites have impacted the environmental conditions at the subject property; these sites are listed in the table below.

SITES WITH CLOSED RELEASE CASES				
Site	Address	Distance from subject property	Database	Comments
Foamy Car Wash/Whittaker WE	4404 Magnolia Ave.	<1/8 mile E	HIST CORTESE, HIST UST, LUST, CA FID UST, SWEEPS UST, EDR US Hist Auto Stat	A release of gasoline was discovered in 1996. Depth to groundwater ranged between 65 and 79 feet below ground surface with a consistent flow direction toward the southwest. A soil vapor extraction system was operated at the site for

				roughly 1.5 years. VOCs were no longer detected in groundwater after remediation, however VOCs were reported in the confirmation soil samples. Total petroleum hydrocarbons gasoline range (TPHg), toluene, xylene, and ethylbenzene were detected at 3,300.9, 2,094, 40,507, and 5,027 ppb, respectively. Case closed in 2003. Due to the distance from the subject property (at least 200 feet) and the lack of VOCs in groundwater, it is unlikely that this site has impacted the environmental conditions at the subject property.
Public Employee Riv. Co/Bell Cleaning Co	4336 Market Street	<1/8 mile ENE	LUST, SLIC, HIST CORTESE, US Brownfields, FINDS, EDR US Hist Cleaners	During a 1989 UST removal, VOCs (including TPHg, trichloroethylene [TCE], and tetrachloroethylene [PCE]) were discovered in the soil. Soil vapor extraction remediation was conducted from June 2002 to January 2003 and again from July 2010 to December 2010. The groundwater flow direction was reported in 2006 to be southwesterly. PCE was reported at 1.20 micrograms per liter (µg/L) in the well closest to the subject property in 2006. Case closed in 2011. Based on the relatively low concentration, distance, and case status, it is not likely that this site has impacted the environmental conditions at the subject property.
Associated National Mortgage	4279 El Dorado St	1/8 – ¼ mile NNW	LUST, HIST CORTESE	Case closed in 1995.

County Garage (Riverside)/County of Riverside Fleet Services/Transportation Center (Riverside)/ Riverside Co GSA Fleet Services	4293 Orange Street	1/8 – ¼ mile E	RCRA-SQG, HIST CORTESE, LUST, CA FID UST, SWEEPS UST, EMI, HIST UST, UST	Case closed in 2010.
Rome's Tire Service/Rime's Tire Service, Inc./Rome's Tire and Auto Supply/Brown LR	4150 Market Street	1/8 – ¼ mile NE	HIST CORTESE, LUST, Notify 65, HIST UST, EDR US Hist Auto Stat	Case closed in 1997.
Foamy Car Wash	4401 Main Street	<1/8 mile E	LUST	Case closed; date not reported.
Riverside County Administrative Center	4080 Lemon Street	¼ - ½ mile ENE	LUST, CHMIRS, HIST CORTESE, CA FID UST, SWEEPS UST, EMI	Case closed in 1998.
Mobil #18-D3H	3315 14th Street	¼ - ½ mile ESE	HIST CORTESE, LUST, CA FID UST, SWEEPS UST	Case closed in 2008.
Chevron #96984	3304 14th Street	¼ - ½ ESE	LUST, HIST UST, SWEEPS UST	Case closed in 2008.
Market Street Properties	3801 Market Street	¼ - ½ mile NE	SLIC	Case closed in 2011.
So Cal Gas/Riverside MGP	10th Street and Howard Street	½ - 1 mile East	DEED, VCP, ENVIROSTOR	Release of polycyclic aromatic hydrocarbons, TPH, PCBs and VOCs to soil only. Review of EDR report indicates case has been closed and post-closure sampling was performed. No concentrations reported.
Grin Chemical Company	3972 Main Street	¼ - ½ mile ENE	CERC-NFRAP, ENVIROSTOR	Envirostor case closed in 1985. A Preliminary Assessment for the site was started in April 1985 and completed in October 1985. The site was subsequently archived because it reportedly did not qualify for the NPL.

Four of the 30 sites reported a release to soil and/or groundwater, for which those sites are still under investigation. After a review of documents available on Geotracker, it appears that the Thrifty Oil #343/ARCO #9713 site has impacted the environmental conditions at the subject property. It is also possible that the Campbell Oil Company site groundwater contamination has impacted environmental conditions at the subject property. The sites with open release cases are discussed in the table below.

SITES WITH OPEN RELEASE CASES				
Site	Address	Distance from subject property	Database	Comments
Thrifty Oil #343 / ARCO #9713/Millers LB Radiator & Fender Service/Tesoro USA #63343//Riverside Petroleum Co	4395 Market Street	<1/8 mile E	RCRA-SQG, FINDS, LUST, UST, US BROWNFIELDS, CHMIRS, HIST UST, HIST CORTEST, CA FID UST, SWEEPS UST, EDR HIST Auto Stat, EDR US Hist Cleaners	An unauthorized release of gasoline was discovered at this gas station in 1997. The direction of groundwater flow is to the southwest, toward RCH. Based on review of the 2012 third quarter groundwater monitoring report, the TPHg impacted groundwater plume extends onto the northeastern portion of the RCH property. Concentrations of benzene and TPHg in well MW-21 (on the RCH property) were as high as 145 and 7,540 µg/l, respectively in the early 2000s, while most the recent concentrations of benzene and TPHg were less than the detection limit.
Campbell Oil Company/Clines Auto Body/Press Enterprise Garage	4491 Brockton Ave.	<1/8 mile WNW	LUST, HIST CORTESE, RCRA-SQG, FINDS, HIST UST, EDR US Hist Auto Stat	An unauthorized release of gasoline was discovered in 1986. The extent of contamination at the site has not been fully characterized. Groundwater flow direction is not indicated in the EDR report or on the Geotracker website. Groundwater samples collected at the site in 2011 reported a benzene concentration of 3,390 µg/L. Based on the proximity of this site to the subject property, this site may have potentially impacted environmental conditions at the western portion of the subject property.
Riverside Produce Company / Former Miceli Property	4271 and 4293 Market Street	<1/8 mile ENE	LUST, HIST UST, US Brownfields, FINDS	An unauthorized release was discovered in 1989. The direction of groundwater flow at the site is to the southwest, toward RCH. Based on review of the fourth quarter 2011 groundwater monitoring report, concentration of TPHg, benzene and 1,2 dichloroethylene have been significantly reduced through remediation including soil vapor extraction, air sparging and

				free product removal. The contaminant plume extents have been defined and it appears as though the site has not impacted the environmental conditions at the subject property.
Pine Center Cleaners	4644 Pine Street	1/8 – ¼ mile W	RCRA-SQG, FINDS, SLIC, DRYCLEANERS, HAZNET, EMI, EDR US Hist Cleaners	This site was reportedly used as a drycleaners from 1964 to 2008. A Phase II site investigation in 2004, it was determined that the groundwater and soil at the site is contaminated with PCE and TCE. A groundwater sample taken as part of the Phase II investigation reported a chlorinated hydrocarbon concentration of 200 ppb. The contaminant plume extends off the site in a westerly direction. Based on the distance of this site from the subject property and the direction of plume migration, it appears unlikely that the site has impacted environmental conditions at the subject property.

11.3. EDR Proprietary Historical Databases

The following computer databases were included in this search:

ACRONYM	DATABASE	SEARCH DISTANCE
EDR MGP	EDR Proprietary Manufactured Gas Plants	1 mile
EDR US Hist Auto Stat	EDR Proprietary Historic Gas Stations	0.25 mile
EDR US Hist Cleaners	EDR Proprietary Historic Dry Cleaners	0.25 mile

Forty-five sites were listed under EDR proprietary historical databases. Of these 45 sites, 7 were also listed in federal databases and 11 were listed in state databases. Sites listed in federal or state databases are reported in Sections 11.1 and 11.2; the remainder of the sites are listed in the table below. As no release has been reported at these sites, it is unlikely that these sites have impacted the environmental conditions at the subject property.

SITES LISTED IN EDR PROPRIETARY DATABASES			
Site	Address	Distance from subject property	Database
Olinjies County Clinic	3810 14th Street	<1/8 mile E	EDR US Hist Cleaners
Reeves Repair Service	3769 14th Street	<1/8 mile ENE	EDR US Hist Auto Stat
Standard Stations Inc.	4488 Magnolia Ave.	<1/8 mile SE	EDR US Hist Cleaners EDR US Hist Auto Stat
Young G L	4466 Magnolia Ave.	<1/8 mile ESE	EDR US Hist Cleaners
Whittaker W E	4404 Magnolia Ave.	<1/8 mile E	EDR US Hist Auto Stat
Royal Laundry Co Inc	4440 Brockton Ave. 4444 Brockton Ave.	<1/8 mile NW	EDR US Hist Cleaners
ACME Curtain Laundry	4435 Brockton Ave.	<1/8 mile NW	EDR US Hist Cleaners
Tip Top Laundry	4407 Brockton Ave.	<1/8 mile NNW	EDR US Hist Cleaners
Riverside Laundry	4459 Brockton Ave.	<1/8 mile WNW	EDR US Hist Cleaners
Willson S Auto Top Shop	4390 Market Street	<1/8 mile ENE	EDR US Hist Auto Stat
Geisel John	3730 14th Street	< 1/8 mile E	EDR US Hist Cleaners
Wilson J Harold	4340 Market Street	< 1/8 Mile ENE	EDR US Hist Auto Stat
Hurley P H / Bloch D R	4310 Main Street	< 1/8 Mile E	EDR Hist. Cleaners, EDR Hist. Auto Stat
Robhman Barbara	4277 Main Street	1/8 – ¼ mile ENE	EDR Hist. Cleaners
Allen Frank	4214 Market Street	1/8 – ¼ mile ENE	EDR Hist. Auto Stat
Stepanek H W / Holmes L E Roy	4212 Market Street	1/8 – ¼ mile ENE	EDR Hist. Cleaners EDR Hist. Auto Stat
Thomas F Clare Inc	4240 Main Street	1/8 – ¼ mile ENE	EDR US Hist Auto Stat
Firestone Auto Supply and Service Stores	4199 Market Street	1/8 – ¼ mile NE	EDR Hist. Auto Stat
Westenhaver & Wood	4198 Market Street	1/8 – ¼ mile ENE	EDR Hist. Auto Stat
Twelfth Street Cleaners	3732 12th Street	1/8 – ¼ mile ENE	EDR Hist. Cleaners
Dempseys Laundromat	3730 12th Street	1/8 – ¼ mile ENE	EDR Hist. Cleaners
Montgomery W D /Gates H R	4176 Market Street	1/8 – ¼ mile NE	EDR Hist. Cleaners EDR Hist. Auto Stat
Lowe R J	4174 Market Street	1/8 – ¼ mile NE	EDR Hist. Auto Stat
Goodrich Silvertown Stores / Club Cleaners	4180 Main Street	1/8 – ¼ mile ENE	EDR Hist. Cleaners EDR Hist. Auto Stat
Brown L R	4150 Market Dr	1/8- ¼ mile NE	EDR Hist. Auto Stat
Peterson & Maine / Maine CE Service	4135 Market Street	1/8- ¼ mile NE	EDR Hist. Cleaners EDR Hist. Auto Stat
Sappington Vaughn	4110 Market Street	1/8- ¼ mile NE	EDR Hist. Auto Stat
Dolk S A	3875 11th Street	1/8- ¼ mile NE	EDR Hist. Auto Stat
Rubidoux Service Station / Patton C G	4096 Market Street	1/8- ¼ mile NE	EDR Hist. Cleaners EDR Hist. Auto Stat
Hughes D W	3739 11th Street	1/8- ¼ mile EE	EDR Hist. Auto Stat
Pine Center Cleaners	4644 Pine Street	1/8 – ¼ mile W	EDR Hist. Cleaners
Knight J F	4099 Main Street	1/8 – ¼ mile ENE	EDR Hist. Auto Stat
Riverside Gas and Electric Light Co	3084 E. 10th Street	½ - 1 mile E	EDR MPG

11.4. Unmapped Sites

Unmapped sites are due to inadequate address information. A total of 42 sites were listed in the EDR report as unmapped sites due to insufficient address information. Dudek performed additional research to accurately locate these sites in relation to the subject property. Dudek was able to map 29 of the 42 sites and determined that 26 of the sites were located greater than 1 mile from the subject property. The three remaining sites are discussed below. Thirteen sites were not able to be located. These sites were listed in the EMI, LF, NPDES, LUST, and HAZNET databases.

- Two listings were reported for the Riverside Plume, located approximately 0.6 miles east of the subject property. This site was listed in the SLIC database and is reported as on open release case on the Geotracker website. The contaminants of concern are fertilizer, pesticides/herbicides and VOCs. There are no concentrations or plume extents available on Geotracker. Based on the distance from the site, it is unlikely that this site has impacted environmental conditions at the subject property.
- Ticore Building/Riverside County, located approximately 0.4 miles northeast of the subject property. This site was listed in the HAZNET database, which does not indicate the presence of an unauthorized release.
- Riverside Housing Authority located 3350 Mulberry Ave, approximately 0.9 miles northeast of the subject property. This site was listed in the HAZNET database, which does not indicate the presence of an unauthorized release.

11.5. Detailed Discussion of the Subject Property

The subject property was listed in nine of the databases searched by EDR in the Radius Report; HAZNET, LUST, UST, SWEEPS UST, EMI, FINDS, HIST CORTESE, CA FID UST, and RCRA-SQG.

- Riverside Community Hospital, 4445 Magnolia Avenue, was listed in the HAZNET database. The HAZNET database records waste sent off-site for disposal and/or recycling but are not necessarily indicative of a release.
- Riverside Community Hospital, 4445 Magnolia Avenue, was listed in the LUST, UST, SWEEPS UST, HIST CORTESE, and CA FID UST databases. The UST, SWEEPS UST, HIST CORTESE, and CA FID UST databases maintain records of USTs on a property. The databases report that one UST is active on the subject property. The LUST database entry documented a release that occurred at the subject property. A release of diesel fuel to soil was entered into the LUST database in December 1987. The case was reportedly closed in September 1989. Additional information regarding the remedial action is presented in Section 5.3.1.

- Riverside Community Hospital, 4445 Magnolia Avenue, was identified in the EMI and FINDS databases. The EMI and FINDS databases document air pollution information as reported to the South Coast Air Quality Management District.
- Computerized Diagnostic Imaging, 4000 14th Street, was listed in the RCRA-SQG, FINDS, and HAZNET databases. The HAZNET and RCRA-SQG databases records waste sent off-site for disposal and/or recycling and quantities of hazardous waste on-site but are not necessarily indicative of a release. The FINDS database indicated that the subject property has engaged in waste shipment or generation activities and is not indicative of a release.
- Diagnostic Breast Imaging Ctr, 4500 Brockton Avenue, was listed in the RCRA-SQG, FINDS, and HAZNET databases. The HAZNET and RCRA-SQG databases records waste sent off-site for disposal and/or recycling and quantities of hazardous waste on-site but are not necessarily indicative of a release. The FINDS database indicated that the subject property has engaged in waste shipment or generation activities and is not indicative of a release.

A HMBEP for 4445 Magnolia Avenue was reviewed as part of this Phase I ESA. The HMBEP reviewed was incomplete as it was not dated and did not contain a map depicting the chemical storage locations. The HMBEP included the following activities conducted at the subject property: handle hazardous materials, own and operate a UST, generate hazardous waste, and recycle more than 100 kg per month of excluded or exempted recyclable materials. No violations were noted for the subject property. Chemicals used at the subject property are described in the table below; locations of the chemicals were not specified in the record.

HMBEP Chemical Inventory			
Chemical	Largest Container	Physical State	Maximum Daily Amount
Sulfuric Acid	55 gallons	Liquid	165 gallons
Diethylene glycol	20 gallon	Liquid	20 gallons
Sodium Hydroxide	100 pounds	Liquid	100 pounds
Aminotri	55 gallons	Liquid	165 gallons
Chlorine Granules	100 pounds	Solid	100 pounds
Sodium Hydroxide	15 gallons	Liquid	15 gallons
Diethylaminoethanol	10 gallons	Liquid	10 gallons
Sodium Sulfite	100 pounds	Liquid	100 pounds
SP Buffered 10% Formalin	1 gallon	Liquid	4 gallons
SP Buffered 10% Formalin	1 gallon	Liquid	48 gallons

SP Buffered 10% Formalin	90 ounces	Liquid	22,500 ounces
SP Buffered 10% Formalin	30 ounces	Liquid	7,500 ounces
SP Buffered 10% Formalin	16 ounces	Liquid	112 ounces
Hydrogen Peroxide	16 ounces	Liquid	80 ounces
Hydrogen Peroxide	16 ounces	Liquid	80 ounces
Blitz II Surgical Instrument Cleaner and Lubricant	10.75 ounces	Liquid	21.5 ounces
Hydrogen Peroxide	16 ounces	Liquid	160 ounces
SP Buffered 10% Formalin	0.1 gallon	Liquid	1.4 gallons
Stainless Steel Polish	21 ounces	Liquid	42 ounces
Steris 20 Sterile Concentrate	1 ounce	Liquid	140 ounces
Hydrogen Peroxide	16 ounces	Liquid	112 ounces
Sodium Nitrite	10 gallons	Liquid	10 gallons
Hydrochloric Acid	150 pounds	Liquid	150 pounds

Dudek did not observe many of these chemicals stored in large containers. For example, Dudek did not observe drums of sulfuric or hydrochloric acid. Additionally, these chemicals were not on a 2012 chemical inventory prepared by RCH. The chemical inventory provided by RCH is listed below. The larger quantities of materials are stored in the following areas: chiller and boiler rooms in the main hospital building at 4445 Magnolia Avenue, 4000 14th Street, and 4500 Brockton Avenue.

2012 RCH Chemical Inventory			
Chemical	Quantity	Department	How Stored
Wavicide	4 gallons	CDIC Ultrasound	plastic container
T Spray	250 ml bottle x 12	CDIC Ultrasound	plastic spray bottle
10% formalin	25 (30ml) containers	Emergency	specimen containers
Cidex OPA	28 gallons (16 in reprocessor)	Endoscopy	plastic container or in reprocessor
70% Isopropyl Alcohol	12 gallons (1 in reprocessor)	Endoscopy	plastic container
Formalin	10 boxes/36 count	Endoscopy	4 ounce plastic container
Prolystica Enzymatic Cleaner 2x Concentrate	7 gallons 2 connected to	Endoscopy	plastic container
Formalin 10%	5 gallons	Laboratory	plastic container
Xylene	10 gallons	Laboratory	plastic container
Ammonium Hydroxide	500 ml	Laboratory	glass bottle
HCL	1000 ml	Laboratory	glass bottle
Methyl Alcohol	6 gallons	Laboratory	glass bottle
Hydrogen Peroxide	80 ml	Laboratory	glass bottle

Clorox Bleach Na Hypochlorit	3 quart x 3	Laboratory	plastic container
Boric Acid	2.5 grams x 10	Laboratory	plastic container
6 N HCL	25 ml x 8	Laboratory	plastic container
Buff. Wright/Giemsa Stain	1000 ml x 1	Laboratory	plastic container
Protocol Wright/Gkemsa Pak	2000 ml kits x 16	Laboratory	plastic container
LH Cleaner	80 ml x 1	Laboratory	plastic container/cube
LH Retic Pak	2000 ml x 2	Laboratory	plastic container
LH Reagent Kit	2400 ml x10	Laboratory	plastic container
Lyse SIll Diff Rgt	5 L Cube x 4	Laboratory	cube
LH Diluent	20 L Cube x 29	Laboratory	cube
Hemosil Cleansing Soln	500 ml x 8	Laboratory	plastic container
Hemosil Cleaning Agent	80 ml x 6	Laboratory	plastic container
Hemosil Factor Diluent	100 ml x 28	Laboratory	plastic container
Hemosil Rinse Soln	2000 ml x 14	Laboratory	plastic container
Clinitest	100 ml x 7	Laboratory	glass bottle
Lctotest	100 ml x 5	Laboratory	glass bottle
Detachol adhesive removal	40 vials	NICU/Peds	boxed
10% Formalin	120 ml-1 gallon	NICU/L&D OR	Plastic container
Empower Foam	Spray -24 ounce	NICU/L&D OR	Plastic container
Peroxide	16 ounce	NICU/PP	Plastic container
Betadine	8 ounce & swabs	NICU/L&D	Plastic container
70% Alcohol	prep pads	L&D	Boxed
Benzoin	spray and swabs	L&D	Plastic container
10% Formalin	4 gallons	Operating Room	plastic container
S-Klenz	1 gallon	Operating Room	plastic container
Liquid descaler	1 gallon	Operating Room	plastic container
Cidex OPA	1 gallon	Operating Room	plastic container
Formaldehyde	1 gallon	Operating Room	plastic container
70% alcohol	4 pints	Operating Room	plastic container
AT-TACK	8 ounce	Operating Room	plastic container
95% alcohol	6-1 ounce bottles	Operating Room	plastic container
Detachol adhesive	40 vials	Operating Room	plastic container
Fog-proof lens solution	1-4 ounce bottle	Operating Room	plastic container
Benzoin (tincture)	20 swabs	Operating Room	boxed
Alum	36 ounce	Pharmacy	plastic container
Na Thiosulfate	1 lb	Pharmacy	glass bottle
Dehydrated Alcohol	500 ml	Pharmacy	glass bottle
Acetone	4 ounce	Pharmacy	glass bottle
Ferric Subsalate solution	500 ml	Pharmacy	glass bottle
BT-408 Steam Treatment	10 gallons	Plant Operations	plastic container
BT-311 Boiler Treatment	15 gallons	Plant Operations	drum w/ 2nd container
CT-502 CW Treatment	140 gallons	Plant Operations	drum w/ 2nd container
CT-535 CW Treatment	120 gallons	Plant Operations	plastic container
Chlorine Granules	100 pounds	Plant Operations	drum w/ 2nd container

BromMax	100 pounds	Plant Operations	drum w/ 2nd container
BT-501L Boiler Treatment	100 pounds	Plant Operations	plastic container
CL-120 Cleaner	150 pounds	Plant Operations	drum w/ 2nd container
Formalin	1 case	Radiology	30 ml containers
Cidex OPA	8 gallons	Respiratory	plastic container
Isopropyl Alcohol	4 pints	Respiratory	plastic container
Formalin	12-1 ounce	Respiratory	plastic container
Bleach	1 gallons	Respiratory	plastic container
Klenzyme	4 gallons	Respiratory	plastic container
Tergal 800 Detergent	4 gallons	Respiratory	plastic container
Cidex OPA	1 gallon	Ultrasound	Plastic Container

Additional parcels included in the Riverside Community Hospital Specific Plan but not included in the subject property for this Phase I ESA are discussed in Appendix H.

12. Evaluation of Potential Hazards and Environmental Concerns

Dudek obtained information regarding the following potential sources of hazards and hazardous material releases from the interview, site reconnaissance, and the EDR report.

Agricultural Use
Based on a review of historical aerial photographs, the subject property has not been used for agriculture.

Off-Site Sources
Based on the results of the database search by EDR it is likely that off-site sources have impacted the environmental conditions of the subject property, in the northeastern and western portions of the subject property.

PCB Items
Several transformers were observed on the subject property but no staining was observed. Staining was observed in the hydraulic elevator rooms in the parking structure. According to a statement from a facilities employee during the site reconnaissance, a release of hydraulic oil in the subsurface occurred several years ago associated with the elevator shaft in the parking garage.

Fill Material
No fill material was observed during the site reconnaissance. Dudek did not review a geotechnical report for the subject property or collect soil samples to determine if fill material is present in the subsurface.

Debris
No debris was observed on the subject property.

Tanks
Five USTs were previously located at the property (one 120-gallon leaded gasoline, one 280-gallon leaded gasoline, one 1,000-gallon diesel, one 3,000-gallon diesel, and one 6,000-gallon diesel; Figure 2). Petroleum-impacted soil was identified in the UST area and was excavated and removed. Residual contamination remains in the area of the former USTs, near the main hospital building. Four of the five USTs were removed and one was closed in place. This tank is located beneath the hospital loading dock and was abandoned in place in June 1989 due to the proximity of hospital structures. The County of Riverside Department of Environmental Health issued a No Further Action letter for the five USTs located at 4445 Magnolia Avenue in September 1989.

A 10,000-gallon diesel UST fueling the backup generators was observed in the northeastern portion of the subject property, just south of 14th Street, during the site reconnaissance. No other tanks were observed on the subject property.

13. Conclusions and Recommendations

Information obtained during the Phase I ESA indicated that the northeastern portion of subject property has been used as a hospital since 1925. Previous uses in the remainder of the subject property appeared to be vacant land and sports fields. The entire subject property currently consists of the hospital, medical office buildings, a parking garage, and parking lots.

Adjacent properties consist of a school, community theater, gas stations, automobile repair, medical offices, and miscellaneous commercial properties.

Five USTs were previously located at the subject property (one 120-gallon leaded gasoline, one 280-gallon leaded gasoline, one 1,000-gallon diesel, one 3,000-gallon diesel, and one 6,000-gallon diesel; Figure 2). The two leaded gasoline and 1,000-gallon diesel tanks were removed from the site in 1988. The 3,000-gallon diesel UST was removed from the site in June 1989. The 6,000-gallon diesel UST was abandoned in place in June 1989.

A 10,000-gallon diesel UST fueling the backup generators is currently located in the northeastern portion of the subject property, just south of 14th Street.

Based on a review of the regulatory database search, it is likely that other properties have impacted the environmental conditions at the subject property, namely the properties located at 4395 Market Street and 4491 Brockton Avenue.

- An unauthorized release of gasoline was discovered at 4395 Market Street (a gas station) in 1997. The direction of groundwater flow is to the southwest, toward RCH. Based on review of the 2012 third quarter groundwater monitoring report, the TPHg impacted groundwater plume extends onto the northeastern portion of

the RCH property. Concentrations of benzene and TPHg in well MW-21 (on the RCH property) were as high as 145 and 7,540 µg/l, respectively in the early 2000s, while most the recent concentrations of benzene and TPHg were less than the detection limit.

- An unauthorized release of gasoline was discovered at 4491 Brockton Avenue in 1986. The extent of contamination at the site has not been fully characterized. Groundwater flow direction is not indicated in the EDR report or on the Geotracker website. Groundwater samples collected at the site in 2011 reported a benzene concentration of 3,390 µg/L. Based on the proximity of this site to the subject property, this site may have potentially impacted environmental conditions at the subject property (western portion). A former dry cleaners and machine shop were formerly located immediately west of the subject property. It is possible that these former sites impacted the environmental conditions at the subject property.

Dudek has performed a Phase I Environmental Site Assessment of the subject property in conformance with the scope and limitations of ASTM Practice E 1527-05. This assessment has revealed evidence of the following recognized environmental conditions in connection with the subject property:

- Residual contamination remains in the subsurface due to the former leaking USTs on the subject property. An existing UST is located in the area of the former USTs;
- Release of hydraulic oil (unknown PCB content), due to a leaking cylinder, in the subsurface associated with the northernmost parking structure elevator; and
- Based on the review of the EDR report, it is likely that at least one off-site property has impacted the environmental conditions at the subject property (northeastern and western portions of the subject property).

Based on these findings, recognized environmental conditions were identified that may adversely affect the subject property. Dudek recommends that a subsurface soil and soil vapor investigation be conducted prior to the commencement of construction activities in the north, northeast, and western portions of the subject property. Additionally, Dudek recommends investigation of the soil in the area of the hydraulic oil release by the parking structure elevator. Dudek also recommends that air monitoring for VOCs be conducted during subsurface work at the RCH.

Dudek also recommends that a lead-based paint and asbestos survey be conducted prior to the demolition of structures on the subject property. Should lead-based paint or asbestos-containing materials be identified during survey, abatement should be conducted according to local, state, and federal guidelines.

14. Limitations

The following data gaps are identified for this Phase I ESA. These data gaps are not anticipated to have a significant impact on the findings of the Phase I ESA.

- The HMBEP did not contain a map depicting locations of hazardous materials and/or chemical storage.

- Historical information regarding the subject property prior to 1925 is limited. Although topographic maps were provided for 1903 and 1904, the subject property was not visible on the 1903 map and the 1904 map has a relatively small scale and does not show subject property details.

- Due to the size and large number of rooms associated with the hospital buildings, the site reconnaissance did not include an inspection of every area of the hospital. Dudek was led by facility personnel to chemical storage areas at the subject property.

The findings and conclusions presented in this report are professional opinions based solely upon the indicated data described in this report, visual observations of the property and vicinity and our interpretation of the available historical information and documents reviewed. Dudek makes no warranty as to the accuracy of statements made by others or the accuracy of information included in documentation reviewed in connection with this study. It should be recognized that this study was not intended to be a definitive investigation of potential contamination at the property and that the recommendations do not necessarily include all conditions that may be present. Because the scope of the investigation was limited, it is possible that currently unrecognized conditions or contamination might exist at the property.

No warranties or guarantees or representations, expressed or implied, are made by Dudek, except that this report has been prepared in accordance with current generally accepted practices and standards consistent with the level of care and skill exercised under similar circumstances by other professionals performing the same or similar services. The conclusions are intended exclusively for the purpose outlined herein and may not be suitable to satisfy the needs of other users. Thus, any use or reuse of this document is at the sole risk of said user.

Qualifications of Environmental Professionals

Environmental Professional	Professional License	Degree(s)	Years Experience	Task Performed
Nicole Peacock	Professional Engineer, State of California; Professional Geologist, State of California	B.S., Civil and Environmental Engineering, B.S. Geology, University of California, Los Angeles, 1999	13	Report Preparation and Review
Patrick Rentz	none	B.S., Geology, University of California, San Diego, 2007 M.S., Geology, University of California, San Diego, 2010	6	Report Preparation
Susie Smith	G.I.T.	B.A., Geology, California State University Fullerton, 2008	10	Report Preparation, Site Reconnaissance, Interviews

Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92506

Inquiry Number: 3602238.2s
May 09, 2013

The EDR Radius Map™ Report with GeoCheck®

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Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

4445 MAGNOLIA AVENUE
RIVERSIDE, CA 92506

COORDINATES

Latitude (North):	33.9765000 - 33˚ 58' 35.40''
Longitude (West):	117.3823000 - 117˚ 22' 56.28''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	464684.8
UTM Y (Meters):	3759421.8
Elevation:	822 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	33117-H4 RIVERSIDE WEST, CA
Most Recent Revision:	1980
East Map:	33117-H3 RIVERSIDE EAST, CA
Most Recent Revision:	1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2012
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
RIVERSIDE COMMUNITY HOSPITAL 4445 MAGNOLIA AVENUE RIVERSIDE, CA 92501	HAZNET	N/A
RIVERSIDE COMMUNITY HOSPITAL 4445 MAGNOLIA AVE RIVERSIDE, CA 92501	LUST UST SWEEPS UST EMI	N/A
RIVERSIDE COMM HOSP 4445 MAGNOLIA AVENUE RIVERSIDE, CA 92501	FINDS	N/A

EXECUTIVE SUMMARY

RIVERSIDE COMMUNITY HOSPITAL 4445 MAGNOLIA AVE RIVERSIDE, CA 92501	HIST CORTESE LUST Status: Completed - Case Closed	N/A
RIVERSIDE COMMUNITY HOSPITAL 4445 MAGNOLIA AVE RIVERSIDE, CA 92501	CA FID UST	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ..... National Priority List
Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ..... Federal Facility Site Information listing

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List

US INST CONTROL ..... Sites with Institutional Controls
LUCIS ..... Land Use Control Information System

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land
FEMA UST ..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP ..... Voluntary Cleanup Program Properties
INDIAN VCP ..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
HIST Cal-Sites ..... Historical Calsites Database
SCH ..... School Property Evaluation Program
Toxic Pits ..... Toxic Pits Cleanup Act Sites
CDL ..... Clandestine Drug Labs
US HIST CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LIENS ..... Environmental Liens Listing
DEED ..... Deed Restriction Listing

EXECUTIVE SUMMARY

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators
DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
CA BOND EXP. PLAN	Bond Expenditure Plan
UIC	UIC Listing
NPDES	NPDES Permits Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
ENF	Enforcement Action Listing
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing
Financial Assurance	Financial Assurance Information Listing
LEAD SMELTERS	Lead Smelter Sites
2020 COR ACTION	2020 Corrective Action Program List
US AIRS	Aerometric Information Retrieval System Facility Subsystem
PRP	Potentially Responsible Parties
WDS	Waste Discharge System
EPA WATCH LIST	EPA WATCH LIST
US FIN ASSUR	Financial Assurance Information
PCB TRANSFORMER	PCB Transformer Registration Database
PROC	Certified Processors Database
MWMP	Medical Waste Management Program Listing

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site List

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 02/05/2013 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GRIN CHEM CO	3792 MAIN ST	NE 1/4 - 1/2 (0.476 mi.)	181	263

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/12/2013 has revealed that there are 12 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COMPUTERIZED DIAGNOSTIC IMAGIN	***4000 14TH ST***	***NE 0 - 1/8 (0.002 mi.)***	***7***	***16***
ARCO FACILITY NO 09713	***4395 MARKET ST***	***E 0 - 1/8 (0.006 mi.)***	***B16***	***30***
SHERWIN-WILLIAMS CO	***4267 MARKET ST***	***ENE 0 - 1/8 (0.105 mi.)***	***G83***	***125***
RIVERSIDE CO G S A FLEET SVCS	4293 ORANGE ST	E 1/8 - 1/4 (0.186 mi.)	N127	182
WINSTON TIRE	***4135 MARKET ST***	***NE 1/8 - 1/4 (0.216 mi.)***	***P143***	***198***
LEWIS P M LABORATORIES#	***4121 BROCKTON AVE***	***N 1/8 - 1/4 (0.216 mi.)***	***144***	***200***

Lower Elevation	Address	Direction / Distance	Map ID	Page
DIAGNOSTIC BREAST IMAGING CTR	***4500 BROCKTON AVE STE 2***	***WNW 0 - 1/8 (0.003 mi.)***	***C8***	***19***
CLINES AUTO BODY	***4491 BROOKTON AVE***	***WNW 0 - 1/8 (0.009 mi.)***	***C34***	***63***
BRITISH SPORTS AND IMPORTS	***4489 BROCKTON AVE***	***WNW 0 - 1/8 (0.010 mi.)***	***C35***	***65***
BROCKTON AUTO CLINIC	***4468 BROCKTON AVE***	***NW 0 - 1/8 (0.027 mi.)***	***C40***	***70***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
COMPUTERIZED DIAGNOSTIC IMAGIN	***4646 BROCKTON AVE***	***WSW 0 - 1/8 (0.084 mi.)***	***75***	***101***
PINE CENTER CLEANERS	***4644 PINE ST***	***W 1/8 - 1/4 (0.241 mi.)***	***S155***	***212***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 03/13/2013 has revealed that there are 4 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GRIN CHEMICAL COMPANY Status: No Further Action	3972 MAIN STREET	ENE 1/4 - 1/2 (0.292 mi.)	168	235
FAIRFIELD CHEMICALS Status: Inactive - Needs Evaluation	3075 14TH ST	ESE 1/2 - 1 (0.537 mi.)	182	264
SO CAL GAS/RIVERSIDE MGP Status: Active	***10TH STREET AND HOWARD***	***E 1/2 - 1 (0.712 mi.)***	***185***	***265***
WEILAND & COMPANY Status: Inactive - Needs Evaluation	3491 COMMERCE	ENE 1/2 - 1 (0.902 mi.)	186	277

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 03/18/2013 has revealed that there are 19 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY OIL #343/ ARCO #9713	4395 MARKET ST	E 0 - 1/8 (0.006 mi.)	B17	31
Not reported Status: Open - Remediation	***4395 MARKET***	***E 0 - 1/8 (0.006 mi.)***	***B21***	***35***
FOAMY CARWASH Status: Completed - Case Closed	***4404 MAGNOLIA AVE***	***E 0 - 1/8 (0.008 mi.)***	***B33***	***60***
PUBLIC EMPLOYEE RIV. CO (PERC)	***4336 MARKET ST***	***ENE 0 - 1/8 (0.065 mi.)***	***G60***	***86***
PUBLIC EMPLOYEE RIV. CO (	***4336***	***ENE 0 - 1/8 (0.065 mi.)***	***G61***	***86***
FOAMY CAR WASH	4401 MAIN ST	E 0 - 1/8 (0.082 mi.)	F69	97
RIVERSIDE PRODUCE COMPANY Status: Open - Remediation	***4271 MARKET ST***	***ENE 0 - 1/8 (0.102 mi.)***	***G81***	***112***

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ASSOCIATED NATIONAL MORTGAGE	4279 EL DORADO ST	NNW 1/8 - 1/4 (0.169 mi.)	M120	174
ASSOCIATED NATIONAL MORTG	***4279 EL DORADO***	***NNW 1/8 - 1/4 (0.169 mi.)***	***M121***	***175***
Status: Completed - Case Closed				
COUNTY GARAGE (RIVERSIDE)	***4293 ORANGE ST***	***E 1/8 - 1/4 (0.186 mi.)***	***N126***	***179***
TRANSPORTATION CENTER (RIVERSI	***4293 ORANGE ST***	***E 1/8 - 1/4 (0.186 mi.)***	***N129***	***184***
Status: Completed - Case Closed				
ROME'S TIRE SERVICE	***4150 MARKET ST***	***NE 1/8 - 1/4 (0.192 mi.)***	***P132***	***190***
Status: Completed - Case Closed				
Not reported	***4080 LEMON***	***ENE 1/4 - 1/2 (0.345 mi.)***	***V175***	***248***
Status: Completed - Case Closed				
RSDE COUNTY ADMINISTRATIVE CTR	***4080 LEMON ST***	***ENE 1/4 - 1/2 (0.345 mi.)***	***V176***	***251***
MOBIL #18-D3H	***3315 14TH ST***	***ESE 1/4 - 1/2 (0.378 mi.)***	***W177***	***253***
Status: Completed - Case Closed				
CHEVRON #96984	3304 14TH ST	ESE 1/4 - 1/2 (0.384 mi.)	W178	258
CHEVRON #96984	***3304 14TH ST***	***ESE 1/4 - 1/2 (0.384 mi.)***	***W179***	***259***
Status: Completed - Case Closed				

Lower Elevation	Address	Direction / Distance	Map ID	Page
CAMPBELL OIL COMPANY	4491 BROCKTON AVENUE	WNW 0 - 1/8 (0.008 mi.)	C28	48
Status: Open - Assessment & Interim Remedial Action				
CAMPBELL OIL COMPANY	***4491***	***WNW 0 - 1/8 (0.008 mi.)***	***C30***	***57***

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 03/18/2013 has revealed that there are 3 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PUBLIC EMPLOYEE RIV. CO (PERC)	***4336 MARKET ST***	***ENE 0 - 1/8 (0.065 mi.)***	***G60***	***86***
Facility Status: Completed - Case Closed				
MARKET STREET PROPERTIES	3801 MARKET STREET	NE 1/4 - 1/2 (0.459 mi.)	180	262
Facility Status: Completed - Case Closed				

Lower Elevation	Address	Direction / Distance	Map ID	Page
PINE CENTER CLEANERS	***4644 PINE ST***	***W 1/8 - 1/4 (0.241 mi.)***	***S155***	***212***
Facility Status: Open - Site Assessment				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 03/18/2013 has revealed that there are 4 UST

sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TESORO USA #63343	4395 MARKET ST	E 0 - 1/8 (0.006 mi.)	B19	33
COUNTY OF RIVERSIDE FLEET SERV	4293 ORANGE ST	E 1/8 - 1/4 (0.186 mi.)	N128	183
COUNTY OF RIVERSIDE HALL OF JU	4100 MAIN ST	ENE 1/8 - 1/4 (0.245 mi.)	R157	217

Lower Elevation	Address	Direction / Distance	Map ID	Page
RIVERSIDE COUNTY OFFICE OF EDU	3939 13TH ST	NE 0 - 1/8 (0.081 mi.)	H68	96

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 12/10/2012 has revealed that there are 62 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
3781 14TH	*3781 14TH*	*ENE 0 - 1/8 (0.004 mi.)*	*B9*	*21*
3779 14TH	*3779 14TH*	*ENE 0 - 1/8 (0.004 mi.)*	*B10*	*23*
3775 14TH	*3775 14TH*	*ENE 0 - 1/8 (0.004 mi.)*	*B12*	*25*
3785 14TH	*3785 14TH*	*ENE 0 - 1/8 (0.004 mi.)*	*B13*	*27*
4395 MARKET	*4395 MARKET*	*E 0 - 1/8 (0.006 mi.)*	*B20*	*33*
4398 MARKET	*4398 MARKET*	*ENE 0 - 1/8 (0.043 mi.)*	*B47*	*75*
4343 MARKET	*4343 MARKET*	*ENE 0 - 1/8 (0.047 mi.)*	*B50*	*77*
4380 MARKET	*4380 MARKET*	*ENE 0 - 1/8 (0.049 mi.)*	*B52*	*79*
4344 MARKET	*4344 MARKET*	*ENE 0 - 1/8 (0.062 mi.)*	*G56*	*83*
4336 MARKET	*4336 MARKET*	*ENE 0 - 1/8 (0.065 mi.)*	*G62*	*87*
4310 MARKET	*4310 MARKET*	*ENE 0 - 1/8 (0.075 mi.)*	*G64*	*90*
3858 13TH	*3858 13TH*	*NE 0 - 1/8 (0.079 mi.)*	*G65*	*92*
3874 13TH	*3874 13TH*	*NE 0 - 1/8 (0.079 mi.)*	*H66*	*94*
4399 MAIN	*4399 MAIN*	*E 0 - 1/8 (0.083 mi.)*	*F71*	*98*
4293 MARKET	*4293 MARKET*	*ENE 0 - 1/8 (0.087 mi.)*	*G76*	*104*
4282 MARKET	*4282 MARKET*	*ENE 0 - 1/8 (0.094 mi.)*	*G78*	*106*
4353 MAIN	*4353 MAIN*	*E 0 - 1/8 (0.095 mi.)*	*F79*	*108*
4271 MARKET	*4271 MARKET*	*ENE 0 - 1/8 (0.102 mi.)*	*G80*	*110*
4329 MAIN	*4329 MAIN*	*E 0 - 1/8 (0.103 mi.)*	*I82*	*123*
4267 MARKET	*4267 MARKET*	*ENE 0 - 1/8 (0.105 mi.)*	*G84*	*127*
4307 MAIN	*4307 MAIN*	*E 0 - 1/8 (0.113 mi.)*	*I87*	*129*
4295 MAIN	*4295 MAIN*	*E 0 - 1/8 (0.121 mi.)*	*I88*	*131*
4281 MAIN	*4281 MAIN*	*ENE 1/8 - 1/4 (0.128 mi.)*	*I89*	*133*
4225 MARKET	*4225 MARKET*	*ENE 1/8 - 1/4 (0.136 mi.)*	*J91*	*135*
4267 MAIN	*4267 MAIN*	*ENE 1/8 - 1/4 (0.136 mi.)*	*I92*	*137*
4261 MAIN	*4261 MAIN*	*ENE 1/8 - 1/4 (0.139 mi.)*	*I93*	*139*
4255 MAIN	*4255 MAIN*	*ENE 1/8 - 1/4 (0.143 mi.)*	*K94*	*141*
4212 MARKET	*4212 MARKET*	*ENE 1/8 - 1/4 (0.145 mi.)*	*J96*	*143*
3882 12TH	*3882 12TH*	*NE 1/8 - 1/4 (0.154 mi.)*	*L100*	*146*
3878 12TH	*3878 12TH*	*NE 1/8 - 1/4 (0.154 mi.)*	*L101*	*148*
3868 12TH	*3868 12TH*	*NE 1/8 - 1/4 (0.154 mi.)*	*J102*	*150*

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
3895 12TH	*3895 12TH*	*NE 1/8 - 1/4 (0.155 mi.)*	*L103*	*152*
3877 12TH	*3877 12TH*	*NE 1/8 - 1/4 (0.156 mi.)*	*L104*	*154*
3780 12TH	*3780 12TH*	*ENE 1/8 - 1/4 (0.156 mi.)*	*J105*	*156*
3843 12TH	*3843 12TH*	*NE 1/8 - 1/4 (0.156 mi.)*	*J106*	*158*
3770 12TH	*3770 12TH*	*ENE 1/8 - 1/4 (0.157 mi.)*	*J107*	*160*
4199 MARKET	*4199 MARKET*	*NE 1/8 - 1/4 (0.157 mi.)*	*J111*	*163*
4229 MAIN	*4229 MAIN*	*ENE 1/8 - 1/4 (0.158 mi.)*	*K113*	*165*
3760 12TH	*3760 12TH*	*ENE 1/8 - 1/4 (0.159 mi.)*	*J114*	*167*
3732 12TH	*3732 12TH*	*ENE 1/8 - 1/4 (0.166 mi.)*	*K116*	*169*
4213 MAIN	*4213 MAIN*	*ENE 1/8 - 1/4 (0.168 mi.)*	*K119*	*172*
4166 ALMOND	*4166 ALMOND*	*NE 1/8 - 1/4 (0.180 mi.)*	*L125*	*177*
4135 MARKET	*4135 MARKET*	*NE 1/8 - 1/4 (0.216 mi.)*	*P139*	*195*
3890 11TH	*3890 11TH*	*NE 1/8 - 1/4 (0.228 mi.)*	*Q146*	*202*
3891 11TH	*3891 11TH*	*NE 1/8 - 1/4 (0.230 mi.)*	*Q147*	*204*
3875 11TH	*3875 11TH*	*NE 1/8 - 1/4 (0.230 mi.)*	*Q148*	*206*
3855 11TH	*3855 11TH*	*NE 1/8 - 1/4 (0.231 mi.)*	*Q150*	*208*
4093 MARKET	*4093 MARKET*	*NE 1/8 - 1/4 (0.237 mi.)*	*P153*	*210*
4075 MAIN	*4075 MAIN*	*ENE 1/4 - 1/2 (0.257 mi.)*	*R159*	*218*
4060 ALMOND	*4060 ALMOND*	*NE 1/4 - 1/2 (0.259 mi.)*	*Q160*	*220*
4049 MAIN	*4049 MAIN*	*ENE 1/4 - 1/2 (0.266 mi.)*	*R161*	*222*
4015 MAIN	*4015 MAIN*	*ENE 1/4 - 1/2 (0.277 mi.)*	*R162*	*224*
4035 MARKET	*4035 MARKET*	*NE 1/4 - 1/2 (0.279 mi.)*	*T163*	*226*
4040 ALMOND	*4040 ALMOND*	*NE 1/4 - 1/2 (0.279 mi.)*	*Q164*	*228*
4001 MAIN	*4001 MAIN*	*ENE 1/4 - 1/2 (0.282 mi.)*	*R166*	*231*
4019 MARKET	*4019 MARKET*	*NE 1/4 - 1/2 (0.290 mi.)*	*T167*	*233*
3872 10TH	*3872 10TH*	*NE 1/4 - 1/2 (0.303 mi.)*	*U169*	*236*
3890 10TH	*3890 10TH*	*NE 1/4 - 1/2 (0.303 mi.)*	*U170*	*238*
3796 10TH	*3796 10TH*	*NE 1/4 - 1/2 (0.305 mi.)*	*T171*	*240*
3774 10TH	*3774 10TH*	*NE 1/4 - 1/2 (0.306 mi.)*	*T172*	*242*
3768 10TH	*3768 10TH*	*NE 1/4 - 1/2 (0.307 mi.)*	*T173*	*244*
3760 10TH	*3760 10TH*	*NE 1/4 - 1/2 (0.308 mi.)*	*T174*	*246*

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
EVERGREEN CEMETARY DISPOSAL SI	*4414 14TH STREET*	*NW 1/4 - 1/2 (0.281 mi.)*	*165*	*230*

Local Lists of Registered Storage Tanks

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are

EXECUTIVE SUMMARY

5 CA FID UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY OIL #343	***4395 MARKET ST***	***E 0 - 1/8 (0.006 mi.)***	***B23***	***44***
FOAMY CARWASH	***4404 MAGNOLIA AVE***	***E 0 - 1/8 (0.008 mi.)***	***B33***	***60***
FIRESTONE STORES #2768	***4199 MARKET ST***	***NE 1/8 - 1/4 (0.157 mi.)***	***J108***	***162***
COUNTY GARAGE (RIVERSIDE)	***4293 ORANGE ST***	***E 1/8 - 1/4 (0.186 mi.)***	***N126***	***179***

Lower Elevation	Address	Direction / Distance	Map ID	Page
COUNTY OFFICE OF EDUCATION	***3939 13TH ST***	***NE 0 - 1/8 (0.081 mi.)***	***H67***	***96***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 12 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY OIL STN. #343	4395 MARKET ST	E 0 - 1/8 (0.006 mi.)	B22	43
FOAMY CARWASH	4404 MAGNOLIA AVE	E 0 - 1/8 (0.008 mi.)	B31	58
INSTA-TUNE	4399 MAIN ST	E 0 - 1/8 (0.083 mi.)	F70	97
RIVERSIDE PRODUCE COMPANY	***4271 MARKET ST***	***ENE 0 - 1/8 (0.102 mi.)***	***G81***	***112***
FIRESTONE STORES #2768	4199 MARKET ST	NE 1/8 - 1/4 (0.157 mi.)	J110	163
TRANSPORTATION CENTER (RIVERSI	***4293 ORANGE ST***	***E 1/8 - 1/4 (0.186 mi.)***	***N129***	***184***
ROME'S TIRE AND AUTO SUPPLY	4150 MARKET ST	NE 1/8 - 1/4 (0.192 mi.)	P134	193
RIVERSIDE MONUMENTAL CO.	4291 CEDAR ST	NNW 1/8 - 1/4 (0.203 mi.)	M137	194
RIVERSIDE MONUMENTAL COMPANY	4291 CEDAR ST	NNW 1/8 - 1/4 (0.203 mi.)	M138	195

Lower Elevation	Address	Direction / Distance	Map ID	Page
PRESS ENTERPRISE GARAGE	4491 BROCKTON AVE	WNW 0 - 1/8 (0.008 mi.)	C27	47
BUD & HARRY'S SERVICE	4481 BROCKTON AVE	WNW 0 - 1/8 (0.017 mi.)	C37	68
?	4481 BROCKTON AVE	WNW 0 - 1/8 (0.017 mi.)	C39	69

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY OIL #343	***4395 MARKET ST***	***E 0 - 1/8 (0.006 mi.)***	***B23***	***44***
FOAMY CARWASH	***4404 MAGNOLIA AVE***	***E 0 - 1/8 (0.008 mi.)***	***B33***	***60***
FIRESTONE STORES #2768	***4199 MARKET ST***	***NE 1/8 - 1/4 (0.157 mi.)***	***J108***	***162***
COUNTY GARAGE (RIVERSIDE)	***4293 ORANGE ST***	***E 1/8 - 1/4 (0.186 mi.)***	***N126***	***179***

Lower Elevation	Address	Direction / Distance	Map ID	Page
COUNTY OFFICE OF EDUCATION	***3939 13TH ST***	***NE 0 - 1/8 (0.081 mi.)***	***H67***	***96***

Other Ascertainable Records

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 9 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY OIL #343	***4395 MARKET ST***	***E 0 - 1/8 (0.006 mi.)***	***B23***	***44***
FOAMY CARWASH	***4404 MAGNOLIA AVE***	***E 0 - 1/8 (0.008 mi.)***	***B33***	***60***
PUBLIC EMPLOYEE RIV. CO (	***4336***	***ENE 0 - 1/8 (0.065 mi.)***	***G61***	***86***
ASSOCIATED NATIONAL MORTG	***4279 EL DORADO***	***NNW 1/8 - 1/4 (0.169 mi.)***	***M121***	***175***
COUNTY GARAGE (RIVERSIDE)	***4293 ORANGE ST***	***E 1/8 - 1/4 (0.186 mi.)***	***N126***	***179***
ROME'S TIRE SERVICE	***4150 MARKET ST***	***NE 1/8 - 1/4 (0.192 mi.)***	***P132***	***190***
RSDE COUNTY ADMINISTRATIVE CTR	***4080 LEMON ST***	***ENE 1/4 - 1/2 (0.345 mi.)***	***V176***	***251***
MOBIL #18-D3H	***3315 14TH ST***	***ESE 1/4 - 1/2 (0.378 mi.)***	***W177***	***253***

Lower Elevation	Address	Direction / Distance	Map ID	Page
CAMPBELL OIL COMPANY	***4491***	***WNW 0 - 1/8 (0.008 mi.)***	***C30***	***57***

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 2 Notify 65 sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RIME'S TIRE SERVICE, INC.	4150 MARKET STREET	NE 1/8 - 1/4 (0.192 mi.)	P133	193
STEARNS DOWNTOWN LIQUOR	4029 7TH	NNE 1/2 - 1 (0.538 mi.)	183	265

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 12/11/2012 has revealed that there are 2 DRYCLEANERS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TWELFTH ST. CLEANERS	3732 - 12TH ST	ENE 1/8 - 1/4 (0.166 mi.)	K117	171

Lower Elevation	Address	Direction / Distance	Map ID	Page
PINE CENTER CLEANERS	***4644 PINE ST***	***W 1/8 - 1/4 (0.241 mi.)***	***S155***	***212***

EXECUTIVE SUMMARY

WIP: Well Investigation Program case in the San Gabriel and San Fernando Valley area.

A review of the WIP list, as provided by EDR, and dated 07/03/2009 has revealed that there is 1 WIP site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
QUALITY PRINTING Facility Status: Backlog	200 S RAYMOND AVE	ESE 1/8 - 1/4 (0.196 mi.)	136	194

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the EDR MGP list, as provided by EDR, has revealed that there is 1 EDR MGP site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RIVERSIDE GAS AND ELECTRIC LIG	3084 E. 10TH STREET	E 1/2 - 1 (0.638 mi.)	184	265

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 36 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
REEVES REPAIR SERVICE	3769 14TH ST	E 0 - 1/8 (0.004 mi.)	B11	25
RIVIRSIDEI PIETROLE UM CO	4395 MARKET DR	E 0 - 1/8 (0.006 mi.)	B15	29
MILLER S L B RADIATOR & FENDER	4395 MARKET ST	E 0 - 1/8 (0.006 mi.)	B18	32
STANDARD STATIONS INC	4488 MAGNOLIA AVE	SE 0 - 1/8 (0.008 mi.)	D25	46
WHITTAKER W E	4404 MAGNOLIA AVE	E 0 - 1/8 (0.008 mi.)	B32	59
EMINERT J A	4398 MARKET ST	ENE 0 - 1/8 (0.043 mi.)	B46	74
WLLLSON S AUTO TOP SHOP	4390 MARKET DR	ENE 0 - 1/8 (0.046 mi.)	B49	77
WILSON FRAN	4380 MARKET ST	ENE 0 - 1/8 (0.049 mi.)	B51	79
WILSON J HAROLD	4380 MARKET DR	ENE 0 - 1/8 (0.049 mi.)	B53	81
GEISEL JOHN	3730 14TH ST	E 0 - 1/8 (0.061 mi.)	F55	83

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARR & GRAVES	4344 MARKET ST	ENE 0 - 1/8 (0.062 mi.)	G57	85
WILSON J HAROLD	4340 MARKET DR	ENE 0 - 1/8 (0.065 mi.)	G59	85
TUCKER J M	4399 MAIN ST	E 0 - 1/8 (0.083 mi.)	F73	100
Not reported	4399 MAIN ST	E 0 - 1/8 (0.083 mi.)	F74	100
MOORE CLIFFORD	4380 MAIN ST	E 0 - 1/8 (0.089 mi.)	F77	106
BLOCH D R	4310 MAIN ST	E 0 - 1/8 (0.112 mi.)	I86	129
ALLEN FRANK	4214 MARKET ST	ENE 1/8 - 1/4 (0.143 mi.)	J95	143
HOLMES LE ROY	4212 MARKET ST	ENE 1/8 - 1/4 (0.145 mi.)	J98	145
THOMAS F CLARE INC	4240 MAIN ST	ENE 1/8 - 1/4 (0.152 mi.)	K99	146
FIRESTONE AUTO SUPPLY & SERVIC	4199 MARKET	NE 1/8 - 1/4 (0.157 mi.)	J109	162
WESTENHAVER & WOOD	4198 MARKET ST	ENE 1/8 - 1/4 (0.158 mi.)	J112	165
MONTGOMERY W D	4176 MARKET ST	NE 1/8 - 1/4 (0.173 mi.)	J122	176
LOWE R J	4174 MARKET ST	NE 1/8 - 1/4 (0.175 mi.)	J124	177
GOODRICH SILVERTOWN STORES	4180 MAIN	ENE 1/8 - 1/4 (0.191 mi.)	O130	189
BROWN L R	4150 MARKET DR	NE 1/8 - 1/4 (0.192 mi.)	P135	194
PETERSON & MAINE	4135 MARKET ST	NE 1/8 - 1/4 (0.216 mi.)	P140	197
PEA	4135 MARKET	NE 1/8 - 1/4 (0.216 mi.)	P142	198
SAPPINGTON VAUGHN	4110 MARKET ST	NE 1/8 - 1/4 (0.221 mi.)	P145	201
DOLK S A	3875 11TH ST	NE 1/8 - 1/4 (0.230 mi.)	Q149	208
PATTON C G	4096 MARKET ST	NE 1/8 - 1/4 (0.234 mi.)	P152	210
HUGHES D W	3739 11TH ST	ENE 1/8 - 1/4 (0.238 mi.)	R154	212
KNIGHT J F	4099 MAIN ST	ENE 1/8 - 1/4 (0.249 mi.)	R158	217

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	4491 BROCKTON AVE	WNW 0 - 1/8 (0.008 mi.)	C29	57
Not reported	4489 BROCKTON AVE	WNW 0 - 1/8 (0.010 mi.)	C36	67
BUD & HARRY S FRIENDLY SERVICE	4481 BROCKTON AVE	WNW 0 - 1/8 (0.017 mi.)	C38	69
SMITH & PATTISON	4468 BROCKTON AVE	NW 0 - 1/8 (0.027 mi.)	C41	72

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 23 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OLINJIES COUNTY CLINIC	3810 14TH ST	E 0 - 1/8 (0.002 mi.)	B6	16
RIVERSIDE PETROLEUM CO	4395 MARKET DR	E 0 - 1/8 (0.006 mi.)	B14	29
STANDARD STATIONS INC	4488 MAGNOLIA AV	SE 0 - 1/8 (0.008 mi.)	D24	45
YOUNG G L	4466 MAGNOLIA AVE	ESE 0 - 1/8 (0.008 mi.)	D26	46
GEISEL JOHN	3730 14TH ST	E 0 - 1/8 (0.061 mi.)	F54	82
BJ ET L CO THE	4344 MARKET DR	ENE 0 - 1/8 (0.063 mi.)	G58	85
BELL CLEANING CO	4336 MARKET DR	ENE 0 - 1/8 (0.066 mi.)	G63	89
MOORE CLIFFORD	4399 MAIN ST	E 0 - 1/8 (0.083 mi.)	F72	100
HURLEY P H	4310 MAIN ST	E 0 - 1/8 (0.112 mi.)	I85	129
ROBHMAN BARBARA	4277 MAIN ST	ENE 1/8 - 1/4 (0.130 mi.)	I90	135
STEPANEK H W	4212 MARKET ST	ENE 1/8 - 1/4 (0.145 mi.)	J97	145

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	3732 12TH ST	ENE 1/8 - 1/4 (0.166 mi.)	K115	169
DEMPSEY S LAUNDROMAT	3730 12TH ST	ENE 1/8 - 1/4 (0.166 mi.)	K118	172
GATES H R	4176 MARKET ST	NE 1/8 - 1/4 (0.173 mi.)	J123	177
CLUB CLEANERS	4180 MAIN ST	ENE 1/8 - 1/4 (0.192 mi.)	O131	190
MAINE C E SERVICE	4135 MARKET ST	NE 1/8 - 1/4 (0.216 mi.)	P141	197
RUBIDOUX SERVICE STATION	4096 MARKET ST	NE 1/8 - 1/4 (0.234 mi.)	P151	210

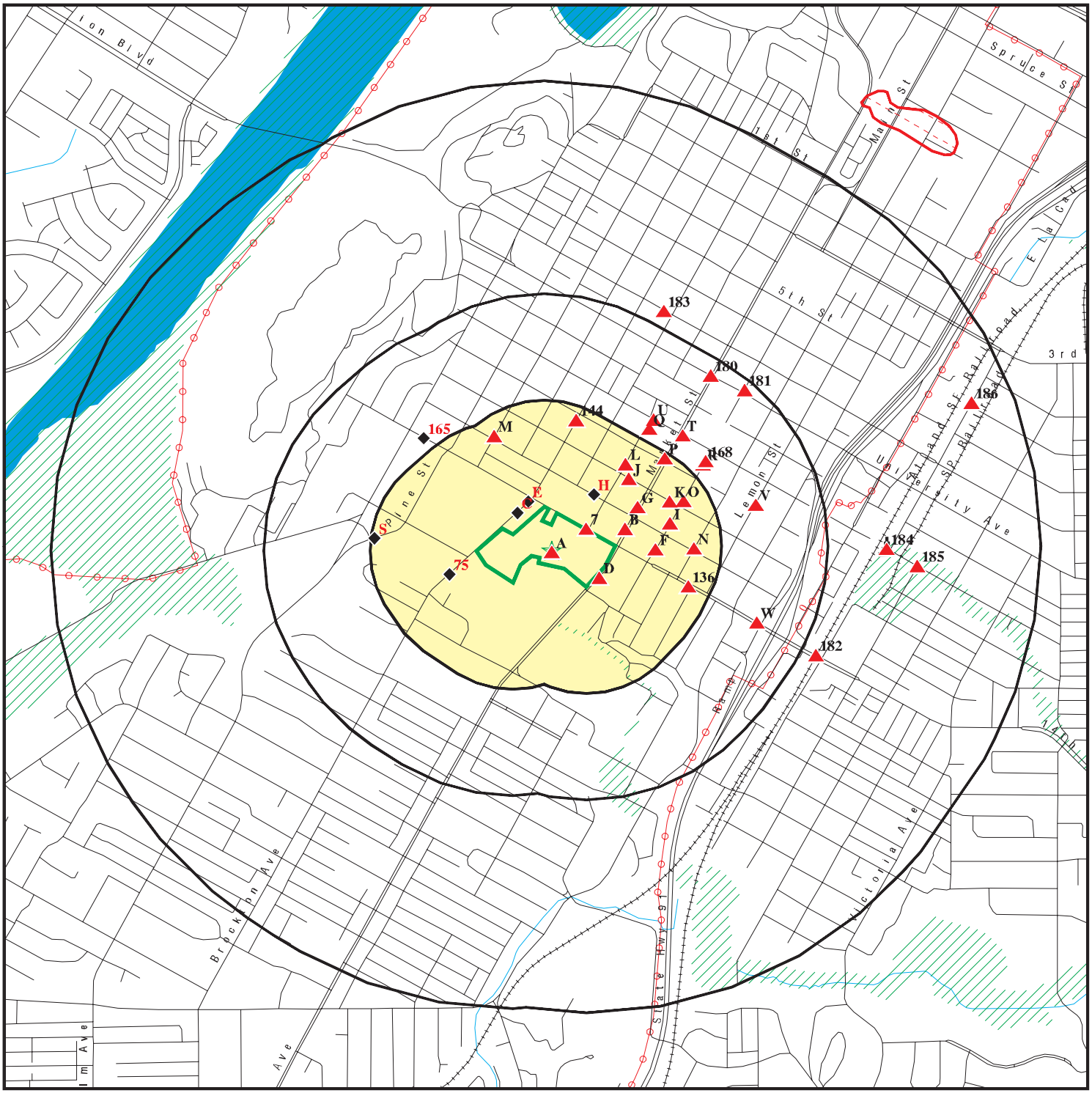
Lower Elevation	Address	Direction / Distance	Map ID	Page
ROYAL LAUNDRY CO INC	4440 BROCKTON AVE	NW 0 - 1/8 (0.030 mi.)	E42	73
ROYAL LAUNDRY CO INC	4444 BROCKTON AVE	NW 0 - 1/8 (0.030 mi.)	C43	73
ACME CURTAIN LAUNDRY	4435 BROCKTON AVE	NW 0 - 1/8 (0.032 mi.)	E44	73
TIP TOP LAUNDRY	4407 BROCKTON AVE	NNW 0 - 1/8 (0.033 mi.)	E45	74
RIVERSIDE LAUNDRY	4459 BROCKTON AVE	WNW 0 - 1/8 (0.044 mi.)	C48	77
Not reported	4644 PINE ST	W 1/8 - 1/4 (0.241 mi.)	S156	216

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 42 records.

Site Name	Database(s)
WEST RIVERSIDE LANDFILL - CLOSED	ENF
RIVERSIDE CNTY FC & WCD	NPDES
RIVERSIDE ANIMAL SHELTER	NPDES
BMD RIVERSIDE	NPDES
RIVERSIDE MINING LIMITED	NPDES
GLEN AVON TRANSPORTATION YARD	LF,NPDES
1899 05 RIVERSIDE E CA INTERIM STA	NPDES
LANDFILL,TEQUESQUITE-CLOSED	LF,FINANCIAL ASSURANCE 1,LDS
CITY OF RIVERSIDE GRANITE PIT MINE	LF
SMITH PROPERTY	LUST
U C RIVERSIDE PARKING LOT #6	LUST
BLYTHE AIRPORT	HIST UST
TICORE BUILDING/RIVERSIDE COUNTY	HAZNET
RIVERSIDE COUNTY TRANSPORTATION CO	HAZNET
RIVERSIDE MEDICAL CLINIC	HAZNET
COUNTY OF RIVERSIDE	HAZNET
CNTY OF RIVERSIDE/EDA	HAZNET
RIVERSIDE COUNTY/BUILDING SERVICES	HAZNET
COUNTY OF RIVERSIDE	HAZNET
CITY OF RIVERSIDE	HAZNET
CITY OF RIVERSIDE	HAZNET
TORO OF RIVERSIDE	HAZNET
CITY OF RIVERSIDE	HAZNET
CITY OF RIVERSIDE - PUBLIC WORKS	HAZNET
COUNTY OF RIVERSIDE REDEVELOPMENT	HAZNET
RIVERSIDE HOUSING AUTHORITY	HAZNET
RIVERSIDE COMMON INVESTORS D. BUTL	HAZNET
1X RIVERSIDE UNIFIED SCHOOL DIST	HAZNET
JURUPA USD/WEST RIVERSIDE ELEM	HAZNET
HOUSING AUTHORITY COUNTY OF RIVERS	HAZNET
DB HOLDING LLP DBA RIVERSIDE PLAZA	HAZNET
COUNTY OF RIVERSIDE, ECONOMIC DEV.	HAZNET
CITY OF RIVERSIDE	HAZNET
COUNTY OF RIVERSIDE - ECONOMIC DEV	HAZNET
RUBIDOUX COMMUNITY SERVICES DISTRI	HAZNET
COUNTY OF RIVERSIDE	HAZNET
RIVERSIDE COUNTY HOUSING	HAZNET
RIVERSIDE COUNTY TRANSPORTATION	HAZNET
RIVERSIDE PLUME	SLIC
RIVERSIDE PLUME	SLIC
RIVERSIDE CITY, PUB WORKS DEPT	EMI
RIVERSIDE CITY, PUB WORKS DEPT	EMI

OVERVIEW MAP - 3602238.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Riverside Community Hospital	CLIENT: Dudek & Associates
ADDRESS: 4445 Magnolia Avenue Riverside CA 92506	CONTACT: Rachel Ganiere
LAT/LONG: 33.9765 / 117.3823	INQUIRY #: 3602238.2s
	DATE: May 09, 2013 3:02 pm

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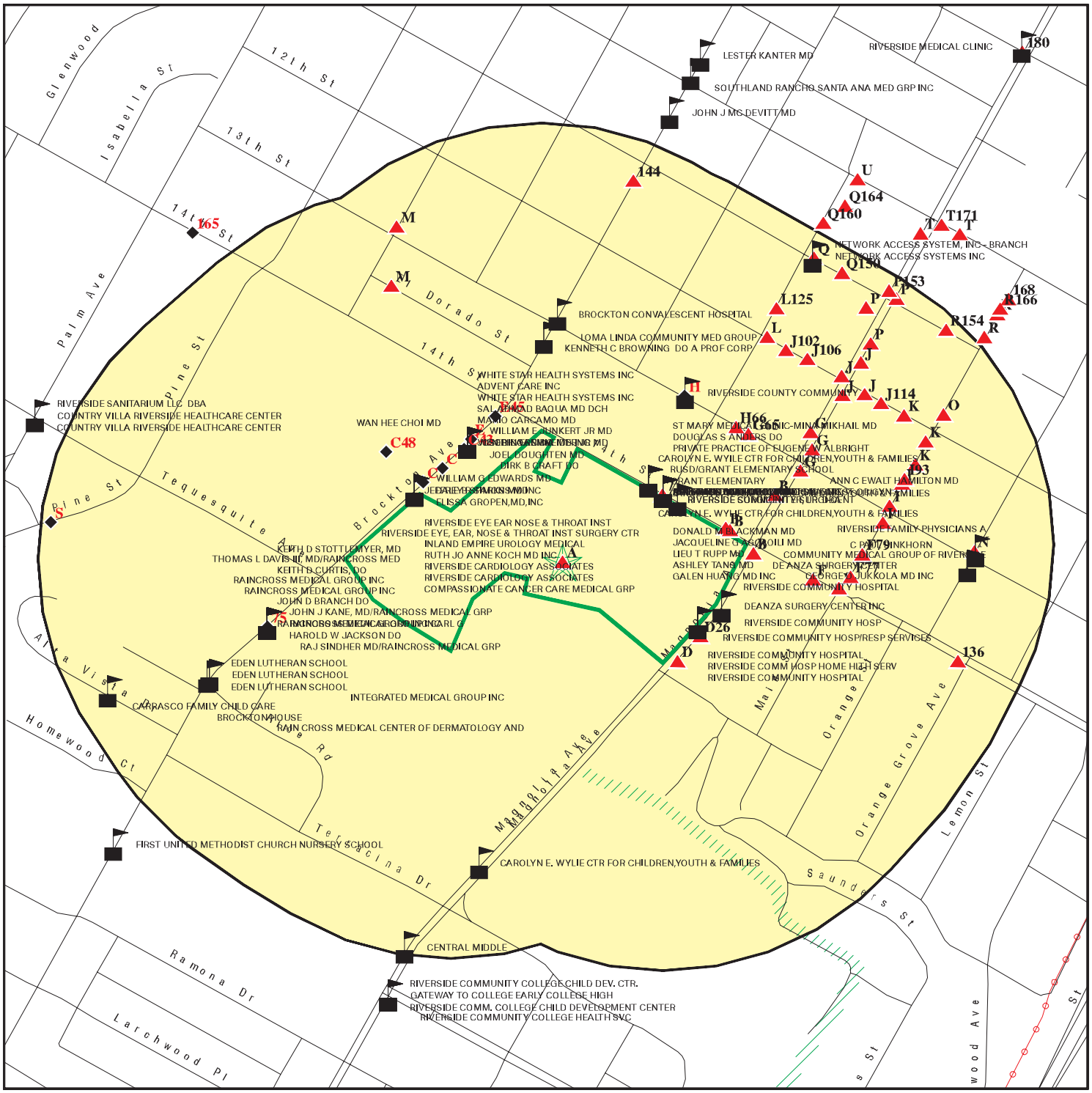
DETAIL MAP - 3602238.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Riverside Community Hospital	CLIENT:	Dudek & Associates
ADDRESS:	4445 Magnolia Avenue Riverside CA 92506	CONTACT:	Rachel Ganiere
LAT/LONG:	33.9765 / 117.3823	INQUIRY #:	3602238.2s
		DATE:	May 09, 2013 3:05 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	1	NR	NR	1
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		8	4	NR	NR	NR	12
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	1	3	NR	4
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500	2	9	5	5	NR	NR	21

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500		1	1	1	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250	1	2	2	NR	NR	NR	5
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		22	26	14	NR	NR	62
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	1	NR	NR	1
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250	1	3	2	NR	NR	NR	6
HIST UST	0.250		7	5	NR	NR	NR	12
SWEEPS UST	0.250	1	3	2	NR	NR	NR	6
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500	1	4	3	2	NR	NR	10
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	1	0	1	NR	2
DRYCLEANERS	0.250		0	2	NR	NR	NR	2
WIP	0.250		0	1	NR	NR	NR	1
ENF	TP		NR	NR	NR	NR	NR	0
HAZNET	TP	1	NR	NR	NR	NR	NR	1
EMI	TP	1	NR	NR	NR	NR	NR	1
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PROC	0.500		0	0	0	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	1	NR	1
EDR US Hist Auto Stat	0.250		20	16	NR	NR	NR	36
EDR US Hist Cleaners	0.250		14	9	NR	NR	NR	23

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 Target Property | **RIVERSIDE COMMUNITY HOSPITAL**
4445 MAGNOLIA AVENUE
RIVERSIDE, CA 92501 | **HAZNET** | **S113023896**
N/A

Site 1 of 5 in cluster A

Actual: 822 ft.

HAZNET:

Year:	2011
Gepaid:	CAL000006168
Contact:	JOSE TORRES, DIRECTOR ENGR'G
Telephone:	9517883151
Mailing Name:	Not reported
Mailing Address:	4445 MAGNOLIA AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925014135
Gen County:	Not reported
TSD EPA ID:	NVT330010000
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	1
Facility County:	Riverside

Year:	2011
Gepaid:	CAL000006168
Contact:	JOSE TORRES, DIRECTOR ENGR'G
Telephone:	9517883151
Mailing Name:	Not reported
Mailing Address:	4445 MAGNOLIA AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925014135
Gen County:	Not reported
TSD EPA ID:	NVT330010000
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	1
Facility County:	Riverside

Year:	2011
Gepaid:	CAL000006168
Contact:	JOSE TORRES, DIRECTOR ENGR'G
Telephone:	9517883151
Mailing Name:	Not reported
Mailing Address:	4445 MAGNOLIA AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925014135
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	2.94
Facility County:	Riverside

Year:	2011
Gepaid:	CAL000006168
Contact:	JOSE TORRES, DIRECTOR ENGR'G
Telephone:	9517883151

RIVERSIDE COMMUNITY HOSPITAL (Continued) **S113023896**

Mailing Name:	Not reported
Mailing Address:	4445 MAGNOLIA AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925014135
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	2.94
Facility County:	Riverside

Year:	2011
Gepaid:	CAL000006168
Contact:	JOSE TORRES, DIRECTOR ENGR'G
Telephone:	9517883151
Mailing Name:	Not reported
Mailing Address:	4445 MAGNOLIA AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925014135
Gen County:	Not reported
TSD EPA ID:	CAD982444481
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus inorganics
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.15
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
164 additional CA_HAZNET: record(s) in the EDR Site Report.

A2 Target Property | **RIVERSIDE COMMUNITY HOSPITAL** | **LUST** | **U002244889**
4445 MAGNOLIA AVE | **UST** | **N/A**
RIVERSIDE, CA 92501 | **SWEEPS UST**
EMI

Site 2 of 5 in cluster A

Actual: 822 ft.

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083300712T
Local Case Num:	Not reported
Case Type:	Soil only
Substance:	Diesel
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	14TH
Enf Type:	CLOS
Funding:	Federal Funds
How Discovered:	Tank Test
How Stopped:	Not reported
Leak Cause:	Corrosion
Leak Source:	Tank
Global ID:	T0606500076
How Stopped Date:	6/30/1987
Enter Date:	12/18/1987

RIVERSIDE COMMUNITY HOSPITAL (Continued) **U002244889**

Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	6/30/1987
Enforcement Date:	Not reported
Close Date:	9/27/1989
Workplan:	Not reported
Pollution Char:	12/18/1987
Remed Plan:	Not reported
Remed Action:	9/12/1989
Monitoring:	Not reported
Enter Date:	12/18/1987
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9759251
Longitude:	-117.3798813
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

UST:

Facility ID:	641
Latitude:	33.97572
Longitude:	-117.38042

RIVERSIDE CO. UST:

Region:	RIVERSIDE
Total Tanks:	2

SWEEPS UST:

Status:	Active
Comp Number:	883
Number:	1
Board Of Equalization:	Not reported
Referral Date:	09-17-92
Action Date:	09-17-92
Created Date:	09-17-92
Tank Status:	A
Owner Tank Id:	Not reported

RIVERSIDE COMMUNITY HOSPITAL (Continued) **U002244889**

Swrcb Tank Id:	33-000-000883-000001
Actv Date:	09-17-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	1

EMI:

Year:	1987
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	1
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0

RIVERSIDE COMMUNITY HOSPITAL (Continued) **U002244889**

Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1996
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	20
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
County Code:	33
Air Basin:	SC

RIVERSIDE COMMUNITY HOSPITAL (Continued) **U002244889**

Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2001
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

A3 Target Property | **RIVERSIDE COMM HOSP** | **FINDS** | **1005775172**
4445 MAGNOLIA AVENUE | **N/A**
RIVERSIDE, CA 92501

Site 3 of 5 in cluster A

Actual: 822 ft.

FINDS:

Registry ID: 110010472167

Environmental Interest/Information System
The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY

A4 Target Property | **RIVERSIDE COMMUNITY HOSPITAL** | **HIST CORTESE** | **S100281146**
4445 MAGNOLIA AVE | **LUST** | **N/A**
RIVERSIDE, CA 92501

Site 4 of 5 in cluster A

Actual: 822 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083300712T

LUST:

Region:	STATE
Global Id:	T0606500076
Latitude:	33.976702
Longitude:	-117.381627
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/27/1989
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	UNK
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083300712T
LOC Case Number:	87557
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500076
Contact Type:	Local Agency Caseworker
Contact Name:	UNK
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	Not reported
Phone Number:	Not reported

RIVERSIDE COMMUNITY HOSPITAL (Continued) **S100281146**

Global Id:	T0606500076
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported

Regulatory Activities:

Global Id:	T0606500076
Action Type:	ENFORCEMENT
Date:	04/09/2009
Action:	Closure/No Further Action Letter - #Site Closure

Global Id:	T0606500076
Action Type:	ENFORCEMENT
Date:	09/27/1989
Action:	Closure/No Further Action Letter

Global Id:	T0606500076
Action Type:	Other
Date:	01/01/1950
Action:	Leak Stopped

Global Id:	T0606500076
Action Type:	ENFORCEMENT
Date:	04/08/2009
Action:	File review - #RCDEH Upload Site File 8/19/2010

Global Id:	T0606500076
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

Global Id:	T0606500076
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	87557
Employee:	Rogers
Site Closed:	Yes
Case Type:	Soil only
Facility Status:	closed/action completed

A5 Target Property | **RIVERSIDE COMMUNITY HOSPITAL** | **CA FID UST** | **U002095641**
4445 MAGNOLIA AVE | **N/A**
RIVERSIDE, CA 92501

Site 5 of 5 in cluster A

Actual: 822 ft.

CA FID UST:

Facility ID:	33000496
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7147883140
Mail To:	Not reported
Mailing Address:	4445 MAGNOLIA AVE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 92501
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

B6 East < 1/8 0.002 mi. 10 ft. | **OLINJIES COUNTY CLINIC** | **EDR US Hist Cleaners** | **1009143321**
3810 14TH ST | **N/A**
RIVERSIDE, CA

Site 1 of 26 in cluster B

Relative: Higher

Actual: 830 ft.

EDR Historical Cleaners:

Name:	OLINJIES COUNTY CLINIC
Year:	1939
Type:	CLEANERS CTPOLSTERY

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7 NE < 1/8 0.002 mi. 10 ft. | **COMPUTERIZED DIAGNOSTIC IMAGING** | **RCRA-SQG FINDS HAZNET** | **1000905002**
4000 14TH ST | **CA0000254466**
RIVERSIDE, CA 92501

Relative: Higher

Actual: 825 ft.

RCRA-SQG:

Date form received by agency:	04/13/1994
Facility name:	COMPUTERIZED DIAGNOSTIC IMAGING
Facility address:	4000 14TH ST RIVERSIDE, CA 92501
EPA ID:	CA0000254466
Mailing address:	CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Contact:	DENISE LESLIE
Contact address:	1660 CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Contact country:	US
Contact telephone:	(909) 276-7500
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator

COMPUTERIZED DIAGNOSTIC IMAGING (Continued) **1000905002**

Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: COMPUTERIZED DIAGNOSTIC IMAGING
Owner/operator address: 1660 CHICAGO AVE STE N15
RIVERSIDE, CA 92507
Owner/operator country: Not reported
Owner/operator telephone: (909) 781-2270
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002616081

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
Year: 1998

COMPUTERIZED DIAGNOSTIC IMAGING (Continued) **1000905002**

Gepaid:	CA0000254466
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.3800
Facility County:	Riverside

Year:	1997
Gepaid:	CA0000254466
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.2662
Facility County:	Riverside

Year:	1996
Gepaid:	CA0000254466
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.3000
Facility County:	Riverside

Year:	1995
Gepaid:	CA0000254466
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0948

COMPUTERIZED DIAGNOSTIC IMAGING (Continued) **1000905002**

Facility County: Riverside

C8 WNW < 1/8 0.003 mi. 18 ft. | **DIAGNOSTIC BREAST IMAGING CTR** | **RCRA-SQG FINDS HAZNET** | **1000905007 CA0000259804**

4500 BROCKTON AVE STE 219
RIVERSIDE, CA 92501

Site 1 of 15 in cluster C

Relative: Lower

Actual: 797 ft.

RCRA-SQG:

Date form received by agency:	04/13/1994
Facility name:	DIAGNOSTIC BREAST IMAGING CTR
Facility address:	4500 BROCKTON AVE STE 219 RIVERSIDE, CA 92501
EPA ID:	CA0000259804
Mailing address:	CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Contact:	JOAN DALTON
Contact address:	1660 CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Contact country:	US
Contact telephone:	(909) 276-7550
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	COMPUTERIZED DIAGNOSTIC IMAGING
Owner/operator address:	1660 CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 781-2270
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

DIAGNOSTIC BREAST IMAGING CTR (Continued) **1000905007**

Violation Status: No violations found

FINDS:

Registry ID: 110002616125

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Year: 1998
Gepaid: CA0000259804
Contact: COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone: 9097812270
Mailing Name: Not reported
Mailing Address: 4500 BROCKTON AVE STE 219
Mailing City,St,Zip: RIVERSIDE, CA 925072031
Gen County: Not reported
TSD EPA ID: CAD983604000
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0879
Facility County: Riverside

Year: 1997
Gepaid: CA0000259804
Contact: COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone: 9097812270
Mailing Name: Not reported
Mailing Address: 4500 BROCKTON AVE STE 219
Mailing City,St,Zip: RIVERSIDE, CA 925072031
Gen County: Not reported
TSD EPA ID: CAD983604000
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0889
Facility County: Riverside

Year: 1996
Gepaid: CA0000259804
Contact: COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone: 9097812270
Mailing Name: Not reported
Mailing Address: 4500 BROCKTON AVE STE 219
Mailing City,St,Zip: RIVERSIDE, CA 925072031
Gen County: Not reported
TSD EPA ID: CAD983604000
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste

DIAGNOSTIC BREAST IMAGING CTR (Continued) **1000905007**

Disposal Method:	Not reported
Tons:	.0437
Facility County:	Riverside

Year:	1996
Gepaid:	CA0000259804
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4500 BROCKTON AVE STE 219
Mailing City,St,Zip:	RIVERSIDE, CA 925072031
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0437
Facility County:	Riverside

Year:	1995
Gepaid:	CA0000259804
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4500 BROCKTON AVE STE 219
Mailing City,St,Zip:	RIVERSIDE, CA 925072031
Gen County:	Not reported
TSD EPA ID:	CAD982524613
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0417
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

B9 **3781 14TH** **US BROWNFIELDS** **1010695932**
ENE **3781 14TH** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.004 mi.
20 ft. **Site 2 of 26 in cluster B**

Relative:
Higher

Actual:
828 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3781 14TH
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976724
Longitude:	-117.379253
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65041
Start date:	Not reported

3781 14TH (Continued) **1010695932**

Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported

3781 14TH (Continued) **1010695932**

Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717822

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

B10 **3779 14TH** **US BROWNFIELDS** **1010695931**
ENE **3779 14TH** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.004 mi.
20 ft. **Site 3 of 26 in cluster B**

Relative:
Higher

Actual:
828 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3779 14TH
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976715
Longitude:	-117.379234
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65040
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400

3779 14TH (Continued) **1010695931**

Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported

3779 14TH (Continued) **1010695931**

Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717813

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

B11 **REEVES REPAIR SERVICE** **EDR US Hist Auto Stat** **1009022017**
East **3769 14TH ST** **N/A**
< 1/8 **RIVERSIDE, CA**
0.004 mi.
20 ft. **Site 4 of 26 in cluster B**

Relative:
Higher

Actual:
829 ft.

EDR Historical Auto Stations:

Name:	REEVES REPAIR SERVICE
Year:	1951
Type:	AUTOMOBILE REPAIRING

B12 **3775 14TH** **US BROWNFIELDS FINDS** **1010695930**
ENE **3775 14TH** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.004 mi.
20 ft. **Site 5 of 26 in cluster B**

Relative:
Higher

Actual:
829 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3775 14TH
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976697
Longitude:	-117.379195
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported

3775 14TH (Continued) **1010695930**

ACRES property ID:	65039
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported

3775 14TH (Continued) **1010695930**

Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717804

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

B13 **3785 14TH** **US BROWNFIELDS** **1010695933**
ENE **3785 14TH** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.004 mi.
20 ft. **Site 6 of 26 in cluster B**

Relative:
Higher

Actual:
828 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3785 14TH
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976742
Longitude:	-117.379292
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65042
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported

3785 14TH (Continued) **1010695933**

Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported

3785 14TH (Continued) **1010695933**

Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717831

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

B14 **RIVERSIDE PETROLEUM CO** **EDR US Hist Cleaners** **1009146944**
East **4395 MARKET DR** **N/A**
< 1/8 **RIVERSIDE, CA**
0.006 mi.
32 ft. **Site 7 of 26 in cluster B**

Relative:
Higher

Actual:
831 ft.

EDR Historical Cleaners:

Name:	RIVERSIDE PETROLEUM CO
Year:	1945
Type:	FAMILY LAUNDRY WORK

B15 **RIVIRSIDEI PIETROLE UM CO** **EDR US Hist Auto Stat** **1009023473**
East **4395 MARKET DR** **N/A**
< 1/8 **RIVERSIDE, CA**
0.006 mi.
32 ft. **Site 8 of 26 in cluster B**

Relative:
Higher

Actual:
831 ft.

EDR Historical Auto Stations:

Name:	RIVIRSIDEI PIETROLE UM CO
Year:	1939
Type:	GAS AND OIL SERVICE STATIONS

B16 **East** **< 1/8** **0.006 mi.** **33 ft.**	**ARCO FACILITY NO 09713** **4395 MARKET ST** **RIVERSIDE, CA 92503** **Site 9 of 26 in cluster B**	**RCRA-SQG** **FINDS**	**1004677870** **CAR000102459**

Relative:
Higher

Actual:
831 ft.

RCRA-SQG:

Date form received by agency:	07/15/2002
Facility name:	ARCO FACILITY NO 09713
Facility address:	4395 MARKET ST RIVERSIDE, CA 92503
EPA ID:	CAR000102459
Mailing address:	P O BOX 6038 ARTESIA, CA 907026038
Contact:	JACK OMAN
Contact address:	P O BOX 6038 ARTESIA, CA 907026038
Contact country:	US
Contact telephone:	(714) 690-2425
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	B P W COAST PRODUCTS LLC
Owner/operator address:	P O BOX 6038 ARTESIA, CA 90702
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 690-2425
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000

ARCO FACILITY NO 09713 (Continued) **1004677870**

Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

FINDS:

Registry ID: 110012203212

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

B17 **THRIFTY OIL #343/ ARCO #9713** **LUST** **S103587826**
East **4395 MARKET ST** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.006 mi.
33 ft. **Site 10 of 26 in cluster B**

Relative:
Higher

Actual:
831 ft.

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Preliminary site assessment underway
Case Number:	083303275T
Local Case Num:	980442
Case Type:	Aquifer affected
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	14TH
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported

THRIFTY OIL #343/ ARCO #9713 (Continued) **S103587826**

Global ID:	T0606500543
How Stopped Date:	Not reported
Enter Date:	11/5/1998
Review Date:	Not reported
Prelim Assess:	7/3/1997
Discover Date:	12/29/1998
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	11/5/1998
GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9767991
Longitude:	-117.3795643
MTBE Date:	12/26/2002
Max MTBE GW:	2480
MTBE Concentration:	1
Max MTBE Soil:	53
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	B
Staff:	VJJ
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

B18 **MILLER S L B RADIATOR & FENDER SERVICE** **EDR US Hist Auto Stat** **1009019715**
East **4395 MARKET ST** **N/A**
< 1/8 **RIVERSIDE, CA**
0.006 mi.
33 ft. **Site 11 of 26 in cluster B**

Relative:
Higher

Actual:
831 ft.

EDR Historical Auto Stations:

Name:	RIVERSIDE PETROLEUM CO
Year:	1936
Type:	GAS AND OIL SERVICE STATIONS

Name:	HAMILTON ROY
Year:	1945
Type:	AUTOMOBILE REPAIRING

Name:	MILLER S L B RADIATOR & FENDER SERVICE
Year:	1951
Type:	AUTOMOBILE REPAIRING

B19 East < 1/8 0.006 mi. 33 ft. | **TESORO USA #63343** | **UST** | **U003839087**
4395 MARKET ST | **N/A**
RIVERSIDE, CA 92501

Site 12 of 26 in cluster B

Relative: Higher

Actual: 831 ft.

UST:

Facility ID:	66
Latitude:	33.97679
Longitude:	-117.37964

RIVERSIDE CO. UST:

Region:	RIVERSIDE
Total Tanks:	3

B20 East < 1/8 0.006 mi. 33 ft. | **4395 MARKET** | **US BROWNFIELDS FINDS** | **1010695663**
4395 MARKET | **N/A**
RIVERSIDE, CA 92501

Site 13 of 26 in cluster B

Relative: Higher

Actual: 831 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4395 MARKET
Property #:	215271009
Parcel size:	0.41
Property Description:	Commercial
Latitude:	33.976816
Longitude:	-117.379598
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65003
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Julia Anne & Robert L Everett
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported

4395 MARKET (Continued) **1010695663**

IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	N
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

4395 MARKET (Continued) **1010695663**

Registry ID: 110038717467

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

B21 **LUST** **S100279602**
East **4395 MARKET** **CHMIRS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.006 mi.
33 ft. **Site 14 of 26 in cluster B**

Relative:
Higher

Actual:
831 ft.

LUST:

Region:	STATE
Global Id:	T0606500543
Latitude:	33.97703091
Longitude:	-117.379738123
Case Type:	LUST Cleanup Site
Status:	Open - Remediation
Status Date:	07/01/1998
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	YR
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083303275T
LOC Case Number:	980442
File Location:	Local Agency
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Unauthorized release of fuel hydrocarbon was first identified during initial site investigation in 1997. Additional site assessment activities since then have characterized its constituents and its lateral and vertical distribution beneath the site. In March 1998, the USTs and all the associated fuel pipings were replaced with new dual-walled fiberglass, effectively eliminating/reducing any potential new release to the soil. In July 1997, eight 10 to 85-foot soil borings (TDD- 1 through TDD-8) were drilled and converted two of the borings (TDD- 1 and TDD-2) into groundwater monitoring wells. Groundwater was measured at approximately 75 feet bgs. Results of soil samples analysis indicated TPHg concentrations ranging from non-detectable (ND) to 6,900 mgkg (TDD-2-20), benzene concentrations ranging from ND to 5.1 mgkg (TDD-2-20), and MTBE concentrations ranging from ND to 20 mg/kg (TDD-7-5). Results of groundwater samples analysis indicated that sample from TDD- 1 contained 26,000 ppb TPHg and 490 ppb benzene, while sample from TDD-2 contained 37,000 ppb TPHg and 600 ppb benzene. In March 1998, three underground storage tanks (USTs) and associated piping were removed from the site and replaced with two new double-walled USTs. Laboratory analysis of soil samples collected during excavation activities detected TPHg, benzene, and MTBE at concentrations up to 23,000 mg/kg, 140 mgkg, and 390 mgkg, respectively. As an interim remedial action, approximately 1,493.3 1 tons of hydrocarbon-impacted soil were transportedoff-site for treatment and recycling. In March 1999, six soil borings (TOC- 1 1 through TOC- 16) were drilled each to a depth of 70 feet bgs. Groundwater was encountered at approximately 60 feet bgs. Analysis of soil samples detected TPHg in borings TOC-15 and TOC-16 at concentrations ranging from ND to 4,900 mg/kg (TOC-16-15). Benzene

(Continued) **S100279602**

was detected in the soil samples from borings TOC- 12, TOC- 14, TOC-1 5, and TOC- 16 at concentrations ranging from ND to 43 mg/kg (TOC-16-50). MTBE was detected in soil samples from borings TOC-12, TOC-14, and TOC-15 at concentrations ranging from ND to 7 mg/kg (TOC-15-20). Groundwater samples analysis indicated TPHg concentrations ranging from 210 ppb (TOC- 13) to 1 1,000 ppb (TOC-14), benzene concentrations ranging from 17 ppb (TOC- 1 1) to 2,500 ppb (TOC- 12), and MTBE concentrations ranging from ND to 590 ppb (TOC-12). In June 2000, four borings (TOC-17 through TOC-20) were drilled to depths ranging from 75.5 to 78.5 feet bgs. Two of the borings (TOC-17 and TOC- 18) were converted into groundwater monitoring wells. Laboratory analysis of the soil samples detected TPHg at concentrations ranging from ND to 3,000 mg/kg (TOC-18-75). Benzene was detected in only one soil sample at concentration of 0.09 mg/kg (TOC-20-70), while MTBE was not detected in any soil samples. Results of groundwater samples analysis indicated TPHg concentration in only one water sample collected from TOC-18 (11,600 ppb). Benzene and MTBE were not detected in the groundwater samples from wells TOC-17 and TOC-18. In October 2001, 3 off-site groundwater monitoring wells (TOC-2 1, through TOC-23) and 3 on-site multiple completion vapor wells (VW-1 through VW-3) were installed. TPHg was detected at concentrations up to 25,000 mg/kg, benzene at concentrations up to 7.3 1 mg/kg, and MTBE at concentrations up to 2.78 mg/kg. Groundwater in the new wells detected up to 2 1,300 ppb TPHg, 247 ppb benzene, and 14 ppb MTBE. In November 2001, a SVE pilot test was conducted using each casings from the vapor wells VW-1, VW-2, and VW-3 as individual recovery points. SVE test indicated that additional vapor wells are needed to remediate the shallow vadose zone (up to 50 feet bgs). In November 2003 two 4-hour AS/SVE pilot tests and a 24-hour VE test were conducted. Between December 2003 and June 2004, three 5-day events of SVE and one 5-day event of Dual Phase Extraction (DPE) were conducted. In March 2007, the DPE s

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500543
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Global Id:	T0606500543
Contact Type:	Local Agency Caseworker
Contact Name:	ANDREA BRIONES
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	abriones@rivcocha.org
Phone Number:	9519558982

Regulatory Activities:

Global Id:	T0606500543
Action Type:	ENFORCEMENT

(Continued) **S100279602**

Date: 08/20/2012
Action: Staff Letter - #RCDEH#082012

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 03/15/2012
Action: Staff Letter - #RCDEH031512

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 07/11/2011
Action: Staff Letter - #RCDEH071111

(Continued) **S100279602**

Global Id: T0606500543
Action Type: RESPONSE
Date: 02/18/2010
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2011
Action: Monitoring Report - Annually

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2010
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 09/01/2011
Action: Other Workplan

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE

(Continued) **S100279602**

Date: 10/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 02/28/2012
Action: Site Assessment Report

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 12/02/2009
Action: Other Report / Document

Global Id: T0606500543
Action Type: RESPONSE
Date: 08/22/2011
Action: Correspondence

Global Id: T0606500543
Action Type: RESPONSE
Date: 09/01/2011
Action: Other Workplan

Global Id: T0606500543
Action Type: RESPONSE
Date: 06/14/2012
Action: Remedial Progress Report

Global Id: T0606500543
Action Type: RESPONSE
Date: 02/28/2012
Action: Other Report / Document

Global Id: T0606500543
Action Type: RESPONSE
Date: 05/11/2012
Action: Other Report / Document

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2012
Action: Monitoring Report - Quarterly

(Continued) **S100279602**

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 02/27/2008
Action: Technical Correspondence / Assistance / Other - #RCDEH 022708

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 05/16/2007
Action: File review

Global Id: T0606500543
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 08/13/2009
Action: Staff Letter - #RCDEH081309

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 03/16/2011
Action: File review - #RCDEH Site File

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2010
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2010
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2010
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE

(Continued) **S100279602**

Date: 04/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 12/19/2011
Action: Staff Letter - #RCDEH121911

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 980442
Employee: Briones-LOP
Site Closed: Not Closed
Case Type: Drinking Water Aquifer affected
Facility Status: RP

CHMIRS:
OES Incident Number: 8910594
OES notification: Not reported
OES Date: Not reported
OES Time: Not reported
Incident Date: 28-JUL-89
Date Completed: 28-JUL-89
Property Use: 500
Agency Id Number: 33075
Agency Incident Number: 8910275
Time Notified: 2133
Time Completed: 2244
Surrounding Area: 500
Estimated Temperature: 75
Property Management: Not reported
Special Studies 1: Not reported
Special Studies 2: Not reported
Special Studies 3: Not reported
Special Studies 4: Not reported

(Continued) **S100279602**

Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	N
Resp Agncy Personel # Of Decontaminated:	0
Responding Agency Personel # Of Injuries:	0
Responding Agency Personel # Of Fatalities:	0
Others Number Of Decontaminated:	0
Others Number Of Injuries:	0
Others Number Of Fatalities:	0
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	WILLAIM A. BRAUN F025
Report Date:	28-JUL-89
Comments:	Not reported
Facility Telephone:	714 782-5679
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Not reported
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	88-92
Agency:	Not reported
Incident Date:	Not reported
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Not reported
Site Type:	Not reported
E Date:	16-MAY-90
Substance:	Not reported
Quantity Released:	Not reported
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
Description:	Not reported

B22 **THRIFTY OIL STN. #343** **HIST UST** **U001576296**
East **4395 MARKET ST** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.006 mi.
33 ft. **Site 15 of 26 in cluster B**

Relative:
Higher

Actual:
831 ft.

HIST UST:

Region:	STATE
Facility ID:	00000002176
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Contact Name:	Not reported
Telephone:	2139239876
Owner Name:	THRIFTY OIL CO.
Owner Address:	10000 LAKEWOOD BLVD.
Owner City,St,Zip:	DOWNEY, CA 90240
Tank Num:	001
Container Num:	343-1
Year Installed:	Not reported
Tank Capacity:	00010164
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	343-2
Year Installed:	Not reported
Tank Capacity:	00010164
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	343-3
Year Installed:	Not reported
Tank Capacity:	00010164
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	343-10
Year Installed:	Not reported
Tank Capacity:	00000280
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	12 gauge
Leak Detection:	Stock Inventor

B23 **THRIFTY OIL #343** **HIST CORTESE** **S101589926**
East **4395 MARKET ST** **CA FID UST** **N/A**
< 1/8 **RIVERSIDE, CA 92501** **SWEEPS UST**
0.006 mi.
33 ft. **Site 16 of 26 in cluster B**

Relative:
Higher

Actual:
831 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083303275T

CA FID UST:

Facility ID:	33001090
Regulated By:	UTNKA
Regulated ID:	00002176
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	2139239876
Mail To:	Not reported
Mailing Address:	10000 LAKEWOOD BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 92501
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	2176
Number:	1
Board Of Equalization:	44-010930
Referral Date:	11-19-92
Action Date:	11-19-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	343-1
Swrcb Tank Id:	33-000-002176-000001
Actv Date:	11-19-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	4

Status:	Active
Comp Number:	2176
Number:	1
Board Of Equalization:	44-010930
Referral Date:	11-19-92
Action Date:	11-19-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	343-2

THRIFTY OIL #343 (Continued) **S101589926**

Swrcb Tank Id:	33-000-002176-000002
Actv Date:	11-19-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	2176
Number:	1
Board Of Equalization:	44-010930
Referral Date:	11-19-92
Action Date:	11-19-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	343-3
Swrcb Tank Id:	33-000-002176-000003
Actv Date:	11-19-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	2176
Number:	1
Board Of Equalization:	44-010930
Referral Date:	11-19-92
Action Date:	11-19-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	343-10
Swrcb Tank Id:	33-000-002176-000004
Actv Date:	11-19-92
Capacity:	280
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL
Number Of Tanks:	Not reported

D24 **STANDARD STATIONS INC** **EDR US Hist Cleaners** **1009146954**
SE **4488 MAGNOLIA AV** **N/A**
< 1/8 **RIVERSIDE, CA**
0.008 mi.
42 ft. **Site 1 of 3 in cluster D**

Relative:
Higher

Actual:
823 ft.

EDR Historical Cleaners:

Name:	STANDARD STATIONS INC
Year:	1945
Type:	FAMILY LAUNDRY WORK

D25
SE
< 1/8
0.008 mi.
42 ft.

STANDARD STATIONS INC
4488 MAGNOLIA AVE
RIVERSIDE, CA

EDR US Hist Auto Stat **1009019724**
N/A

Site 2 of 3 in cluster D

Relative:
Higher

Actual:
823 ft.

EDR Historical Auto Stations:

Name: SOUTHERN GASOLINE STATIONS INC
Year: 1930
Type: GASOLINE AND OIL SERVICE STATIONS

Name: STANDARD STATIONS INC
Year: 1936
Type: GAS AND OIL SERVICE STATIONS

Name: STANDARD STATIONS INC
Year: 1939
Type: GAS AND OIL SERVICE STATIONS

Name: STANDARD STATIONS INC
Year: 1951
Type: GASOLINE STATIONS

D26
ESE
< 1/8
0.008 mi.
43 ft.

YOUNG G L
4466 MAGNOLIA AVE
RIVERSIDE, CA

EDR US Hist Cleaners **1009144525**
N/A

Site 3 of 3 in cluster D

Relative:
Higher

Actual:
827 ft.

EDR Historical Cleaners:

Name: YOUNG G L
Year: 1930
Type: CLOTHES PRESSERS AND CLEANERS

Name: PARIS CLEANERS
Year: 1936
Type: CLOTHES PRESSERS AND CLEANERS

Name: PARIS CLEANERS
Year: 1936
Type: DYERS AND CLEANERS

Name: PARIS CLEANERS
Year: 1939
Type: CLOTHES PRESSERS AND CLEANERS CONT

Name: PARIS CLEANERS
Year: 1945
Type: CLOTHES PRESSERS AND CLEANERS

Name: PARIS CLEANERS
Year: 1945
Type: DYERS AND CLEANERS

C27 WNW < 1/8 0.008 mi. 44 ft. | **PRESS ENTERPRISE GARAGE**
4491 BROCKTON AVE
RIVERSIDE, CA 92501 | **HIST UST** | **U001576283**
N/A

Site 2 of 15 in cluster C

Relative: Lower

Actual: 797 ft.

HIST UST:

Region:	STATE
Facility ID:	00000001676
Facility Type:	Other
Other Type:	FLEET MAINTENANCE
Total Tanks:	0006
Contact Name:	LARRY PEARSON
Telephone:	7146866338
Owner Name:	CAMPBELL OIL CO.
Owner Address:	3010 11TH ST.
Owner City,St,Zip:	RIVERSIDE, CA 92507
Tank Num:	001
Container Num:	5
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	Not reported
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	None
Tank Num:	002
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	WASTE
Type of Fuel:	06
Tank Construction:	Not reported
Leak Detection:	None
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	None
Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00004000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	None
Tank Num:	005
Container Num:	6
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT

PRESS ENTERPRISE GARAGE (Continued) **U001576283**

Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

Tank Num: 006
Container Num: 7
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: None

C28 WNW < 1/8 0.008 mi. 44 ft. **CAMPBELL OIL COMPANY** **LUST** **S108746749**
4491 BROCKTON AVENUE **N/A**
RIVERSIDE, CA 92501

Site 3 of 15 in cluster C

Relative: Lower

Actual: 797 ft.

LUST:

Region:	STATE
Global Id:	T0606500008
Latitude:	33.9773887859262
Longitude:	-117.385160923004
Case Type:	LUST Cleanup Site
Status:	Open - Assessment & Interim Remedial Action
Status Date:	11/26/2012
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	VJB
Local Agency:	Not reported
RB Case Number:	083300084T
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Historic LPH/high BTEX, no Mtbe. Site not fully characterized. VES proposed/approved years ago, but delayed implementation to date. RP recalcitrant/uncooperative. Site slated for purchase/redevelopment as medical bldg, but developer is alo uncooperative.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500008
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Regulatory Activities:

Global Id:	T0606500008
Action Type:	ENFORCEMENT
Date:	08/04/2004
Action:	File review

CAMPBELL OIL COMPANY (Continued) **S108746749**

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/13/2004
Action: Meeting

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/30/2005
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/31/2005
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/11/2005
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/02/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/02/2007
Action: * Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 10/16/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/14/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/13/2004
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/21/2005
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/16/2007
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT

CAMPBELL OIL COMPANY (Continued) **S108746749**

Date: 06/21/2005
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/27/2004
Action: File review

Global Id: T0606500008
Action Type: RESPONSE
Date: 04/06/2010
Action: Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/28/2005
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/25/2005
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 05/06/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 05/03/2010
Action: Meeting

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 03/29/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/16/2009
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/14/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: RESPONSE
Date: 07/30/2005
Action: CAP/RAP - Feasibility Study Report

Global Id: T0606500008
Action Type: RESPONSE
Date: 02/15/2006
Action: Other Report / Document

CAMPBELL OIL COMPANY (Continued) **S108746749**

Global Id: T0606500008
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/06/1987
Action: Referral to Regional Board

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/22/2010
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/23/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 02/09/2006
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/30/2003
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/26/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 06/02/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/14/2010
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 01/05/2006
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 01/10/2006
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT

CAMPBELL OIL COMPANY (Continued) **S108746749**

Date: 07/05/2007
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/13/2007
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/18/2007
Action: * Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 10/22/2008
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 01/05/2006
Action: Remedial Progress Report

Global Id: T0606500008
Action Type: RESPONSE
Date: 01/10/2006
Action: Other Report / Document

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/04/2006
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500008
Action Type: RESPONSE
Date: 04/30/2004
Action: Soil and Water Investigation Report

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/14/2009
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 05/12/2011
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 12/05/2012
Action: Technical Correspondence / Assistance / Other

CAMPBELL OIL COMPANY (Continued) **S108746749**

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 12/12/2012
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: RESPONSE
Date: 08/31/2003
Action: Other Workplan

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/24/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606500008
Action Type: RESPONSE
Date: 08/04/2004
Action: Other Report / Document

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2004
Action: Remedial Progress Report

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/03/2003
Action: * No Action

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/16/2002
Action: * No Action

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/13/2003
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 05/23/2012
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT

CAMPBELL OIL COMPANY (Continued) **S108746749**

Date: 06/01/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/26/2005
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 12/08/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 01/06/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/24/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/01/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/07/2009
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500008
Action Type: RESPONSE
Date: 11/26/2012
Action: Other Report / Document

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/21/2003
Action: * No Action

Global Id: T0606500008
Action Type: RESPONSE
Date: 03/03/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 11/06/2009
Action: Verbal Communication

CAMPBELL OIL COMPANY (Continued) **S108746749**

Global Id: T0606500008
Action Type: RESPONSE
Date: 06/15/2008
Action: Remedial Progress Report

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/21/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 06/10/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/21/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/02/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/24/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/17/2006
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/21/2005
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/10/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0606500008
Action Type: REMEDIATION
Date: 01/01/1950
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606500008
Action Type: ENFORCEMENT

CAMPBELL OIL COMPANY (Continued) **S108746749**

Date: 09/22/2009
Action: Warning Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 11/05/2009
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: RESPONSE
Date: 06/01/2010
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/29/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2005
Action: Remedial Progress Report

Global Id: T0606500008
Action Type: RESPONSE
Date: 08/31/2005
Action: Other Report / Document

Global Id: T0606500008
Action Type: RESPONSE
Date: 08/31/2005
Action: Other Report / Document

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/16/2006
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/22/2005
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/30/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 02/26/2009
Action: Verbal Enforcement

CAMPBELL OIL COMPANY (Continued) **S108746749**

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 01/22/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: RESPONSE
Date: 07/01/2003
Action: Monitoring Report - Quarterly

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 88087
Employee: Bunchek
Site Closed: Referred to Water Board
Case Type: Ground water
Facility Status: 0

C29
WNW
< 1/8
0.008 mi.
44 ft.

4491 BROCKTON AVE
RIVERSIDE, CA 92501

Site 4 of 15 in cluster C

Relative:
Lower

Actual:
797 ft.

EDR US Hist Auto Stat **1015501089**
N/A

EDR Historical Auto Stations:
Name: EDDIES AUTO BODY
Year: 2006
Address: 4491 BROCKTON AVE

C30
WNW
< 1/8
0.008 mi.
44 ft.

CAMPBELL OIL COMPANY
4491
RIVERSIDE, CA 92501

Site 5 of 15 in cluster C

Relative:
Lower

Actual:
797 ft.

HIST CORTESE **S101300552**
LUST **N/A**

CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 083300084T

LUST REG 8:
Region: 8
County: Riverside
Regional Board: Santa Ana Region
Facility Status: Remediation Plan
Case Number: 083300084T
Local Case Num: 88087
Case Type: Aquifer affected
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Cross Street: 14TH
Enf Type: SI

CAMPBELL OIL COMPANY (Continued) **S101300552**

Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	Corrosion
Leak Source:	Tank
Global ID:	T0606500008
How Stopped Date:	10/30/1986
Enter Date:	5/20/1987
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	10/30/1986
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	3/4/1997
Pollution Char:	6/3/1999
Remed Plan:	12/20/1999
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	5/20/1987
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9774371
Longitude:	-117.3843255
MTBE Date:	2/4/2000
Max MTBE GW:	600
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	B
Staff:	VJJ
Staff Initials:	UNK
Lead Agency:	Regional Board
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	LETTER DRAFTED 6 MONTHS AGO, REGARDING STATUS, REPORT. SAMPLED WELL ON 8/12/96 - FREE PRODUCT. FURTHER INVEST REQUIRED.

B31 **FOAMY CARWASH** **HIST UST** **U001576274**
East **4404 MAGNOLIA AVE** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.008 mi.
44 ft. **Site 17 of 26 in cluster B**

Relative:
Higher

Actual:
832 ft.

HIST UST:

Region:	STATE
Facility ID:	00000020132
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004

FOAMY CARWASH (Continued) **U001576274**

Contact Name: Not reported
Telephone: 7146868790
Owner Name: MAXZ B. ABBOTT
Owner Address: 4404 MAGNOLIA STREET
Owner City,St,Zip: RIVERSIDE, CA 92501

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: Visual

B32 **WHITTAKER W E** **EDR US Hist Auto Stat** **1009021830**
East **4404 MAGNOLIA AVE** **N/A**
< 1/8 **RIVERSIDE, CA**
0.008 mi.
44 ft. **Site 18 of 26 in cluster B**

Relative:
Higher

Actual:
832 ft.

EDR Historical Auto Stations:
Name: WHITTAKER W E
Year: 1951
Type: GASOLINE STATIONS

B33 East < 1/8 0.008 mi. 44 ft. | **FOAMY CARWASH 4404 MAGNOLIA AVE RIVERSIDE, CA 92501** | **HIST CORTESE LUST CA FID UST SWEEPS UST** | **S101629420 N/A**

Site 19 of 26 in cluster B

Relative: Higher

Actual: 832 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083302797T

LUST:

Region:	STATE
Global Id:	T0606500453
Latitude:	33.9766957
Longitude:	-117.3796271
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/06/2003
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	SCB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083302797T
LOC Case Number:	960594
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500453
Contact Type:	Regional Board Caseworker
Contact Name:	NANCY OLSON-MARTIN
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	nolson-martin@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0606500453
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	sbolting@rivcocha.org
Phone Number:	9519558982

Regulatory Activities:

Global Id:	T0606500453
Action Type:	ENFORCEMENT
Date:	01/06/2003
Action:	Closure/No Further Action Letter - #Riv Co Closure

Global Id:	T0606500453
Action Type:	Other

FOAMY CARWASH (Continued) **S101629420**

Date:	01/01/1950
Action:	Leak Stopped
Global Id:	T0606500453
Action Type:	ENFORCEMENT
Date:	01/05/2003
Action:	File review - #RCDEH Upload Site File 5/25/2010
Global Id:	T0606500453
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0606500453
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083302797T
Local Case Num:	960594
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	14TH
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0606500453
How Stopped Date:	5/2/1996
Enter Date:	6/20/1996
Review Date:	5/2/1996
Prelim Assess:	10/8/1996
Discover Date:	5/2/1996
Enforcement Date:	Not reported
Close Date:	1/6/2003
Workplan:	9/16/1996
Pollution Char:	12/31/1996
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	6/20/1996
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST

FOAMY CARWASH (Continued) **S101629420**

Latitude: 33.9759421
Longitude: -117.3785483
MTBE Date: Not reported
Max MTBE GW: Not reported
MTBE Concentration: 0
Max MTBE Soil: Not reported
MTBE Fuel: 1
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class: *
Staff: NOM
Staff Initials: UNK
Lead Agency: Local Agency
Local Agency: 33000L
Hydr Basin #: UPPER SANTA ANA VALL
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 33006460
Regulated By: UTNKA
Regulated ID: 00020132
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7146868790
Mail To: Not reported
Mailing Address: 4404 MAGNOLIA AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: RIVERSIDE 92501
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 20132
Number: 1
Board Of Equalization: 44-018070
Referral Date: 09-17-92
Action Date: 09-17-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 000506
Swrcb Tank Id: 33-000-020132-000001
Actv Date: 06-06-90
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 3

FOAMY CARWASH (Continued) **S101629420**

Status:	Active
Comp Number:	20132
Number:	1
Board Of Equalization:	44-018070
Referral Date:	09-17-92
Action Date:	09-17-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	000506
Swrcb Tank Id:	33-000-020132-000002
Actv Date:	06-06-90
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	20132
Number:	1
Board Of Equalization:	44-018070
Referral Date:	09-17-92
Action Date:	09-17-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	00506
Swrcb Tank Id:	33-000-020132-000003
Actv Date:	06-06-90
Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

C34
WNW
< 1/8
0.009 mi.
45 ft.

CLINES AUTO BODY **RCRA-SQG** **1000313704**
4491 BROOKTON AVE **FINDS** **CAD982031510**
RIVERSIDE, CA 92501

Site 6 of 15 in cluster C

Relative:
Lower

Actual:
797 ft.

RCRA-SQG:

Date form received by agency:	08/25/1987
Facility name:	CLINES AUTO BODY
Facility address:	4491 BROOKTON AVE RIVERSIDE, CA 92501
EPA ID:	CAD982031510
Mailing address:	BROOKTON AVE RIVERSIDE, CA 92501
Contact:	ENVIRONMENTAL MANAGER
Contact address:	4491 BROOKTON AVE RIVERSIDE, CA 92501
Contact country:	US
Contact telephone:	(714) 369-9109
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of

CLINES AUTO BODY (Continued) **1000313704**

hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JOHN CLINE JR
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002783159

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

C35 WNW < 1/8 0.010 mi. 52 ft. | **BRITISH SPORTS AND IMPORTS**
4489 BROCKTON AVE
RIVERSIDE, CA 92501 | **RCRA-SQG FINDS HAZNET** | **1001967626 CAR000071290**

Site 7 of 15 in cluster C

Relative: Lower

Actual: 797 ft.

RCRA-SQG:

Date form received by agency:	04/20/2000
Facility name:	BRITISH SPORTS AND IMPORTS
Facility address:	4489 BROCKTON AVE RIVERSIDE, CA 92501
EPA ID:	CAR000071290
Contact:	THOMAS SHANLEY
Contact address:	4489 BROCKTON AVE RIVERSIDE, CA 92501
Contact country:	US
Contact telephone:	(909) 781-0577
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	THOMAS STANLEY
Owner/operator address:	4489 BROCKTON AVE RIVERSIDE, CA 92501
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 781-0577
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined

BRITISH SPORTS AND IMPORTS (Continued) **1001967626**

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Violation Status: No violations found

FINDS:

Registry ID: 110002935799

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
Year: 2003
Gepaid: CAR000071290
Contact: ENVIRONMENTAL MANAGER
Telephone: Not reported
Mailing Name: Not reported
Mailing Address: 4481 BROCKTON AVE
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: Not reported
TSD EPA ID: CAT000613927
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.22
Facility County: Riverside

Year: 2002
Gepaid: CAR000071290
Contact: ENVIRONMENTAL MANAGER
Telephone: Not reported
Mailing Name: Not reported
Mailing Address: 4481 BROCKTON AVE
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: Not reported
TSD EPA ID: CAT000613927
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.22
Facility County: Riverside

Year: 2001
Gepaid: CAR000071290
Contact: ENVIRONMENTAL MANAGER

BRITISH SPORTS AND IMPORTS (Continued) **1001967626**

Telephone:	Not reported
Mailing Name:	Not reported
Mailing Address:	4481 BROCKTON AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925010000
Gen County:	Not reported
TSD EPA ID:	CAT000613927
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Transfer Station
Tons:	0
Facility County:	Riverside

Year:	2001
Gepaid:	CAR000071290
Contact:	ENVIRONMENTAL MANAGER
Telephone:	Not reported
Mailing Name:	Not reported
Mailing Address:	4481 BROCKTON AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925010000
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.15
Facility County:	Riverside

Year:	2001
Gepaid:	CAR000071290
Contact:	ENVIRONMENTAL MANAGER
Telephone:	Not reported
Mailing Name:	Not reported
Mailing Address:	4481 BROCKTON AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925010000
Gen County:	Not reported
TSD EPA ID:	CAT000613927
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.15
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

C36 **EDR US Hist Auto Stat** **1009021751**
WNW **4489 BROCKTON AVE** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.010 mi.
52 ft. **Site 8 of 15 in cluster C**

Relative:
Lower

Actual:
797 ft.

EDR Historical Auto Stations:

Name:	GRASER 0 R
Year:	1930
Type:	AUTO REPAIRING

Name:	EDDIES AUTO BODY & PAINT
Year:	1999

(Continued) **1009021751**

Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2000
Address: 4489 BROCKTON AVE

Name: BECKMANS AUTO REPAIR
Year: 2001
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2002
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2003
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY
Year: 2004
Address: 4489 BROCKTON AVE

Name: EDDIE FISHERS AUTO COLLISION CENTER
Year: 2005
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2006
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2007
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2008
Address: 4489 BROCKTON AVE

C37 **BUD & HARRY'S SERVICE** **HIST UST** **U001576260**
WNW **4481 BROCKTON AVE** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.017 mi.
90 ft. **Site 9 of 15 in cluster C**

Relative:
Lower

Actual:
797 ft.

HIST UST:
Region: STATE
Facility ID: 00000013284
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0003
Contact Name: HARRY L. STEVENS
Telephone: 7146832100
Owner Name: CAMPBELL OIL COMPANY
Owner Address: 3010 11TH ST.
Owner City,St,Zip: RIVERSIDE, CA 92507

Tank Num: 001
Container Num: 1

BUD & HARRY'S SERVICE (Continued) **U001576260**

Year Installed: 1972
Tank Capacity: 00005000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1979
Tank Capacity: 00004000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 1 3
Year Installed: 1972
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

C38 **BUD & HARRY S FRIENDLY SERVICE** **EDR US Hist Auto Stat** **1009022035**
WNW **4481 BROCKTON AVE** **N/A**
< 1/8 **RIVERSIDE, CA**
0.017 mi.
90 ft. **Site 10 of 15 in cluster C**

Relative:
Lower

Actual:
797 ft.

EDR Historical Auto Stations:
Name: BUD & HARRY S FRIENDLY SERVICE
Year: 1951
Type: GASOLINE STATIONS

Name: BECKMANS AUTO REPAIR
Year: 2002
Address: 4481 BROCKTON AVE

C39 **?** **HIST UST** **U001576254**
WNW **4481 BROCKTON AVE** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.017 mi.
90 ft. **Site 11 of 15 in cluster C**

Relative:
Lower

Actual:
797 ft.

HIST UST:
Region: STATE
Facility ID: 00000013283
Facility Type: Not reported
Other Type: BULK PLANT
Total Tanks: 0002
Contact Name: GLEN W. CAMPBELL
Telephone: 7146861676
Owner Name: CAMPBELL OIL COMPANY
Owner Address: 3010 11TH ST.

? (Continued) **U001576254**

Owner City,St,Zip: RIVERSIDE, CA 92507

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1951
Tank Capacity: 00005000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

C40 NW < 1/8 0.027 mi. 144 ft. | **BROCKTON AUTO CLINIC** | **RCRA-SQG FINDS** | **1004675600 CAR000074989**
4468 BROCKTON AVE
RIVERSIDE, CA 92501

Site 12 of 15 in cluster C

Relative: Lower

Actual: 798 ft.

RCRA-SQG:
Date form received by agency: 06/08/2000
Facility name: BROCKTON AUTO CLINIC
Facility address: 4468 BROCKTON AVE
RIVERSIDE, CA 925014005
EPA ID: CAR000074989
Contact: CLINT RANDOLF
Contact address: 4468 BROCKTON AVE
RIVERSIDE, CA 925014005
Contact country: US
Contact telephone: (909) 682-7104
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: LES RANDOLPH
Owner/operator address: 4468 BROCKTON AVE
RIVERSIDE, CA 92501
Owner/operator country: Not reported
Owner/operator telephone: (909) 682-7104
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

BROCKTON AUTO CLINIC (Continued) **1004675600**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Violation Status: No violations found

FINDS:

Registry ID: 110002938091

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

C41 **SMITH & PATTISON** **EDR US Hist Auto Stat** **1009023250**
NW **4468 BROCKTON AVE** **N/A**
< 1/8 **RIVERSIDE, CA**
0.027 mi.
144 ft. **Site 13 of 15 in cluster C**

Relative:
Lower

Actual:
798 ft.

EDR Historical Auto Stations:

Name: SMITH & PATTISON
Year: 1945
Type: AUTOMOBILE REPAIRING

Name: SMITH & PATTISON
Year: 1951
Type: AUTOMOBILE REPAIRING

Name: BROCKTON AUTO CLINIC
Year: 1999
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2000
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2001
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2002
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2005
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2006
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2007
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2008
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2009
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2010
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2011
Address: 4468 BROCKTON AVE

SMITH & PATTISON (Continued) **1009023250**

Name: BROCKTON AUTO CLINIC
Year: 2012
Address: 4468 BROCKTON AVE

E42
NW
< 1/8
0.030 mi.
160 ft.

ROYAL LAUNDRY CO INC **EDR US Hist Cleaners** **1009145777**
4440 BROCKTON AVE **N/A**
RIVERSIDE, CA

Site 1 of 3 in cluster E

Relative:
Lower

Actual:
798 ft.

EDR Historical Cleaners:
Name: ROYAL LAUNDRY CO INC
Year: 1945
Type: FAMILY LAUNDRY WORK

Name: ROYAL LAUNDRY CO INC
Year: 1951
Type: LAUNDRIES

C43
NW
< 1/8
0.030 mi.
160 ft.

ROYAL LAUNDRY CO INC **EDR US Hist Cleaners** **1009143317**
4444 BROCKTON AVE **N/A**
RIVERSIDE, CA

Site 14 of 15 in cluster C

Relative:
Lower

Actual:
799 ft.

EDR Historical Cleaners:
Name: ROYAL LAUNDRY CO INC
Year: 1936
Type: LAUNDRIES

E44
NW
< 1/8
0.032 mi.
170 ft.

ACME CURTAIN LAUNDRY **EDR US Hist Cleaners** **1009145773**
4435 BROCKTON AVE **N/A**
RIVERSIDE, CA

Site 2 of 3 in cluster E

Relative:
Lower

Actual:
798 ft.

EDR Historical Cleaners:
Name: ACME CURTAIN LAUNDRY
Year: 1951
Type: LAUNDRIES

Name: TINY TOT LAUNDRY
Year: 1951
Type: LAUNDRIES

E45 NNW < 1/8 0.033 mi. 176 ft. | **TIP TOP LAUNDRY 4407 BROCKTON AVE RIVERSIDE, CA** | **EDR US Hist Cleaners** | **1009145778 N/A**

Site 3 of 3 in cluster E

Relative: Lower

Actual: 800 ft.

EDR Historical Cleaners:

Name: TIP TOP LAUNDRY CO
Year: 1930
Type: LAUNDRIES STEAM

Name: TIP TOP LAUNDRY
Year: 1936
Type: FAMILY LAUNDRY WORK

Name: TIP TOP LAUNDRY
Year: 1936
Type: LACE AND LACE CURTAIN CLEANERS

Name: TIP TOP LAUNDRY
Year: 1936
Type: LAUNDRIES

Name: TIP TOP LAUNDRY
Year: 1939
Type: FAMILY LAUNDRY WORK

Name: TIP TOP LAUNDRY
Year: 1951
Type: LAUNDRIES

B46 ENE < 1/8 0.043 mi. 225 ft. | **EMINERT J A 4398 MARKET ST RIVERSIDE, CA** | **EDR US Hist Auto Stat** | **1009021445 N/A**

Site 20 of 26 in cluster B

Relative: Higher

Actual: 832 ft.

EDR Historical Auto Stations:

Name: EMINERT J A
Year: 1930
Type: GASOLINE AND OIL SERVICE STATIONS

Name: LAIRD L L
Year: 1936
Type: GAS AND OIL SERVICE STATIONS

Name: DEANZA MUFFLER SERVICE
Year: 1999
Address: 4398 MARKET ST

Name: DEANZA MUFFLER SERVICE
Year: 2000
Address: 4398 MARKET ST

B47 **4398 MARKET** **US BROWNFIELDS** **1010695929**
ENE **4398 MARKET** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.043 mi.
225 ft. **Site 21 of 26 in cluster B**

Relative:
Higher

Actual:
832 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4398 MARKET
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976744
Longitude:	-117.379509
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65038
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4398 MARKET (Continued) **1010695929**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717797

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

C48 WNW < 1/8 0.044 mi. 232 ft. — **RIVERSIDE LAUNDRY**, **4459 BROCKTON AVE**, **RIVERSIDE, CA** — **EDR US Hist Cleaners** — **1009145776** / **N/A**

Site 15 of 15 in cluster C

Relative: Lower
Actual: 798 ft.

EDR Historical Cleaners:

Name:	RIVERSIDE LAUNDRY
Year:	1930
Type:	LAUNDRIES STEAM
Name:	RIVERSIDE LAUNDRY
Year:	1936
Type:	LAUNDRIES
Name:	RIVERSIDE LAUNDRY & DRY CLEANERS
Year:	1951
Type:	LAUNDRIES

B49 ENE < 1/8 0.046 mi. 242 ft. — **WLLLSON S AUTO TOP SHOP**, **4390 MARKET DR**, **RIVERSIDE, CA** — **EDR US Hist Auto Stat** — **1009019406** / **N/A**

Site 22 of 26 in cluster B

Relative: Higher
Actual: 833 ft.

EDR Historical Auto Stations:

Name:	WLLLSON S AUTO TOP SHOP
Year:	1936
Type:	AUTOMOBILE REPAIRS

B50 ENE < 1/8 0.047 mi. 246 ft. — **4343 MARKET**, **4343 MARKET**, **RIVERSIDE, CA 92501** — **US BROWNFIELDS FINDS** — **1010698684** / **N/A**

Site 23 of 26 in cluster B

Relative: Higher
Actual: 832 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4343 MARKET
Property #:	215271004
Parcel size:	0.84
Property Description:	Commercial
Latitude:	33.977262
Longitude:	-117.379363
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64998
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported

4343 MARKET (Continued) **1010698684**

Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Community Inv Ltd Liability Co
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N

4343 MARKET (Continued) **1010698684**

VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717403

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

B51 **WILSON FRAN** **EDR US Hist Auto Stat** **1009022027**
ENE **4380 MARKET ST** **N/A**
< 1/8 **RIVERSIDE, CA**
0.049 mi.
259 ft. **Site 24 of 26 in cluster B**

Relative:
Higher

Actual:
833 ft.

EDR Historical Auto Stations:

Name:	WILSON FRAN
Year:	1951
Type:	AUTOMOBILE REPAIRING

B52 **4380 MARKET** **US BROWNFIELDS** **1010695937**
ENE **4380 MARKET** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.049 mi.
259 ft. **Site 25 of 26 in cluster B**

Relative:
Higher

Actual:
833 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4380 MARKET
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976804
Longitude:	-117.379336
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65037
Start date:	Not reported

4380 MARKET (Continued) **1010695937**

Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N

4380 MARKET (Continued) **1010695937**

Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717788

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

B53 **WILSON J HAROLD** **EDR US Hist Auto Stat** **1009023447**
ENE **4380 MARKET DR** **N/A**
< 1/8 **RIVERSIDE, CA**
0.049 mi.
259 ft. **Site 26 of 26 in cluster B**

Relative:
Higher

Actual:
833 ft.

EDR Historical Auto Stations:

Name:	WILSON J HAROLD
Year:	1945
Type:	Not reported

Name:	TOP DAWG AUTO REPAIR
Year:	1999
Address:	4380 MARKET ST

Name:	TOP DAWG AUTO REPAIR
Year:	2000
Address:	4380 MARKET ST

Name:	TOP DAWG AUTO REPAIR
Year:	2001
Address:	4380 MARKET ST

Name:	TOP DAWG AUTO REPAIR
Year:	2002
Address:	4380 MARKET ST

WILSON J HAROLD (Continued) **1009023447**

Name: TOP DAWG AUTO REPAIR
Year: 2003
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2004
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2005
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2006
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2007
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2008
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2009
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2010
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2011
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2012
Address: 4380 MARKET ST

F54 **GEISEL JOHN** **EDR US Hist Cleaners** **1009145510**
East **3730 14TH ST** **N/A**
< 1/8 **RIVERSIDE, CA**
0.061 mi.
324 ft. **Site 1 of 10 in cluster F**

Relative:
Higher

Actual:
837 ft.

EDR Historical Cleaners:
Name: GEISEL JOHN
Year: 1945
Type: FAMILY LAUNDRY WORK

F55 East < 1/8 0.061 mi. 324 ft. | **GEISEL JOHN** | **EDR US Hist Auto Stat** | **1009023097**
3730 14TH ST | **N/A**
RIVERSIDE, CA

Site 2 of 10 in cluster F

Relative: Higher

Actual: 837 ft.

EDR Historical Auto Stations:

Name:	GEISEL JOHN
Year:	1939
Type:	GAS AND OIL SERVICE STATIONS

G56 ENE < 1/8 0.062 mi. 328 ft. | **4344 MARKET** | **US BROWNFIELDS FINDS** | **1010695936**
4344 MARKET | **N/A**
RIVERSIDE, CA 92501

Site 1 of 16 in cluster G

Relative: Higher

Actual: 833 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4344 MARKET
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.977145
Longitude:	-117.379163
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65036
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported

4344 MARKET (Continued) **1010695936**

IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717779

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES)
is an federal online database for Brownfields Grantees to

4344 MARKET (Continued) **1010695936**

electronically submit data directly to EPA.

G57
ENE
< 1/8
0.062 mi.
328 ft.

MARR & GRAVES
4344 MARKET ST
RIVERSIDE, CA

EDR US Hist Auto Stat **1009021756**
N/A

Site 2 of 16 in cluster G

Relative:
Higher

Actual:
833 ft.

EDR Historical Auto Stations:

Name:	MARR & GRAVES
Year:	1930
Type:	AUTO REPAIRING

G58
ENE
< 1/8
0.063 mi.
334 ft.

BJ ET L CO THE
4344 MARKET DR
RIVERSIDE, CA

EDR US Hist Cleaners **1009143320**
N/A

Site 3 of 16 in cluster G

Relative:
Higher

Actual:
833 ft.

EDR Historical Cleaners:

Name:	BJ ET L CO THE
Year:	1939
Type:	HAT CLEANERS AND BLOCKERS
Name:	BELL CO THE
Year:	1939
Type:	CURTAIN CLEANERS
Name:	BEL L CO THE
Year:	1939
Type:	CLEANERS UPOLSTERY
Name:	BELL CO THE
Year:	1945
Type:	CLOTHES PRESSERS AND CLEANERS

G59
ENE
< 1/8
0.065 mi.
343 ft.

WILSON J HAROLD
4340 MARKET DR
RIVERSIDE, CA

EDR US Hist Auto Stat **1009019407**
N/A

Site 4 of 16 in cluster G

Relative:
Higher

Actual:
833 ft.

EDR Historical Auto Stations:

Name:	WILSON J HAROLD
Year:	1936
Type:	Not reported

G60 ENE < 1/8 0.065 mi. 343 ft. | **PUBLIC EMPLOYEE RIV. CO (PERC)** | **LUST SLIC** | **S104228145 N/A**
4336 MARKET ST
RIVERSIDE, CA 92502

Site 5 of 16 in cluster G

Relative: Higher

Actual: 834 ft.

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	90009
Employee:	Bunchek
Site Closed:	Referred to Water Board
Case Type:	Ground water
Facility Status:	0

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	06/14/2011
Global Id:	T0606500063
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	90009
Latitude:	33.977449939
Longitude:	-117.3786868
Case Type:	Cleanup Program Site
Case Worker:	CAB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083300555T
File Location:	Not reported
Potential Media Affected:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	* Solvents, Other Solvent or Non-Petroleum Hydrocarbon
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

G61 ENE < 1/8 0.065 mi. 343 ft. | **PUBLIC EMPLOYEE RIV. CO (** | **HIST CORTESE LUST** | **S101300588 N/A**
4336
RIVERSIDE, CA 92502

Site 6 of 16 in cluster G

Relative: Higher

Actual: 834 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083300555T

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Remediation Plan
Case Number:	083300555T
Local Case Num:	90009
Case Type:	Aquifer affected
Substance:	Hydrocarbons
Qty Leaked:	Not reported
Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site
Cross Street:	13TH

PUBLIC EMPLOYEE RIV. CO ((Continued) **S101300588**

Enf Type:	SEL
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	Corrosion
Leak Source:	Tank
Global ID:	T0606500063
How Stopped Date:	12/19/1989
Enter Date:	7/21/1987
Review Date:	Not reported
Prelim Assess:	1/30/1990
Discover Date:	12/19/1989
Enforcement Date:	1/1/1965
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	11/15/1990
Remed Plan:	1/8/2001
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	7/21/1987
GW Qualifies:	<
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.97744994
Longitude:	-117.3786868
MTBE Date:	3/10/2000
Max MTBE GW:	5
MTBE Concentration:	2
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	C
Staff:	CAB
Staff Initials:	UNK
Lead Agency:	Regional Board
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	3/6/95 - DRAFTING CAO 8/1/96 - 7/96 SAMPLING RESULTS - PCE 580, BENZENE 700

G62 **4336 MARKET** **US BROWNFIELDS** **1010698413**
ENE **4336 MARKET** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.065 mi.
343 ft. **Site 7 of 16 in cluster G**

Relative:
Higher

Actual:
834 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4336 MARKET
Property #:	215272008
Parcel size:	0.22

4336 MARKET (Continued) **1010698413**

Property Description:	Commercial
Latitude:	33.977196
Longitude:	-117.379071
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64964
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Service Employees International Union 1997
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	N
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N

4336 MARKET (Continued) **1010698413**

Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716896

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

G63 **BELL CLEANING CO** **EDR US Hist Cleaners** **1009144532**
ENE **4336 MARKET DR** **N/A**
< 1/8 **RIVERSIDE, CA**
0.066 mi.
351 ft. **Site 8 of 16 in cluster G**

Relative:
Higher

Actual:
834 ft.

EDR Historical Cleaners:

Name:	BELL CLEANING CO
Year:	1930
Type:	CLOTHES PRESSERS AND CLEANERS
Name:	BELL CLEANING CO
Year:	1936
Type:	DYERS AND CLEANERS
Name:	BELL CLEANING CO
Year:	1936

BELL CLEANING CO (Continued) **1009144532**

Type:	CARPET CLEANERS AND LAYERS
Name:	BELL CLEANING CO
Year:	1936
Type:	CURTAIN CLEANERS
Name:	BELL CLEANING CO
Year:	1936
Type:	FUR CLEANERS AND GLAZERS
Name:	BELL CLEANING CO
Year:	1936
Type:	CLOTHES PRESSERS AND CLEANERS

G64 **4310 MARKET** **US BROWNFIELDS** **1010698414**
ENE **4310 MARKET** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.075 mi.
394 ft. **Site 9 of 16 in cluster G**

Relative:
Higher

Actual:
834 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4310 MARKET
Property #:	215272009
Parcel size:	0.24
Property Description:	Commercial
Latitude:	33.977429
Longitude:	-117.378912
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64965
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Service Employees International Union 1997
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported

4310 MARKET (Continued) **1010698414**

IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

4310 MARKET (Continued) **1010698414**

Registry ID: 110038716903

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

G65 **3858 13TH** **US BROWNFIELDS** **1010698683**
NE **3858 13TH** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.079 mi.
418 ft. **Site 10 of 16 in cluster G**

Relative:
Higher

Actual:
826 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3858 13TH
Property #:	215271003
Parcel size:	0.19
Property Description:	Commercial
Latitude:	33.977848
Longitude:	-117.379693
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64997
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Riverside County Board of Education
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported

3858 13TH (Continued) **1010698683**

State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717396

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

H66 NE < 1/8 0.079 mi. 418 ft. | **3874 13TH**
3874 13TH
RIVERSIDE, CA 92501

Site 1 of 3 in cluster H

US BROWNFIELDS FINDS | **1010698682 N/A**

Relative: Higher

Actual: 823 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3874 13TH
Property #:	215271002
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.977918
Longitude:	-117.379842
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64996
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Riverside County Board of Education
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3874 13TH (Continued) **1010698682**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717387

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

H67 NE < 1/8 0.081 mi. 426 ft. — **COUNTY OFFICE OF EDUCATION**, **3939 13TH ST**, **RIVERSIDE, CA 92502** — **CA FID UST**, **SWEEPS UST** — **S101589939**, **N/A**

Site 2 of 3 in cluster H

Relative: Lower

Actual: 820 ft.

CA FID UST:

Facility ID:	33001444
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7147886553
Mail To:	Not reported
Mailing Address:	P O BOX 868
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 92502
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	65444
Number:	5
Board Of Equalization:	Not reported
Referral Date:	11-18-92
Action Date:	11-18-92
Created Date:	10-07-91
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	33-000-065444-000001
Actv Date:	11-18-92
Capacity:	500
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	1

H68 NE < 1/8 0.081 mi. 426 ft. — **RIVERSIDE COUNTY OFFICE OF EDUCATION**, **3939 13TH ST**, **RIVERSIDE, CA 92501** — **UST** — **U003803312**, **N/A**

Site 3 of 3 in cluster H

Relative: Lower

Actual: 820 ft.

UST:

Facility ID:	642
Latitude:	33.97847
Longitude:	-117.38059

RIVERSIDE CO. UST:

Region:	RIVERSIDE
Total Tanks:	1

F69 East < 1/8 0.082 mi. 434 ft. | **FOAMY CAR WASH** | **LUST** | **S103821059** | **N/A**
4401 MAIN ST
RIVERSIDE, CA

Site 3 of 10 in cluster F

Relative: Higher

Actual: 839 ft.

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	960594
Employee:	Boltinghous-LOP
Site Closed:	Yes
Case Type:	Drinking Water Aquifer affected
Facility Status:	closed/action completed

F70 East < 1/8 0.083 mi. 440 ft. | **INSTA-TUNE** | **HIST UST** | **U001576275** | **N/A**
4399 MAIN ST
RIVERSIDE, CA 92501

Site 4 of 10 in cluster F

Relative: Higher

Actual: 839 ft.

HIST UST:

Region:	STATE
Facility ID:	00000063670
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Contact Name:	WILLIAM ROY
Telephone:	7146861432
Owner Name:	ARTHUR W. MILLER
Owner Address:	5840 DEMING CT.
Owner City,St,Zip:	RIVERSIDE, CA 92506
Tank Num:	001
Container Num:	1
Year Installed:	1963
Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	1963
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	1963
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	004

INSTA-TUNE (Continued) **U001576275**

Container Num: 4
Year Installed: 1963
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: None

F71 **4399 MAIN** **US BROWNFIELDS** **1010698412**
East **4399 MAIN** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.083 mi.
440 ft. **Site 5 of 10 in cluster F**

Relative:
Higher

Actual:
839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4399 MAIN
Property #:	215272007
Parcel size:	Not reported
Property Description:	Commercial
Latitude:	33.976319
Longitude:	-117.378389
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64963
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Elias Teshome
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported

4399 MAIN (Continued) **1010698412**

State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716887

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F72
East
< 1/8
0.083 mi.
440 ft.

MOORE CLIFFORD
4399 MAIN ST
RIVERSIDE, CA

EDR US Hist Cleaners **1009145531**
N/A

Site 6 of 10 in cluster F

Relative:
Higher

Actual:
839 ft.

EDR Historical Cleaners:

Name:	MOORE CLIFFORD
Year:	1945
Type:	FAMILY LAUNDRY WORK

F73
East
< 1/8
0.083 mi.
440 ft.

TUCKER J M
4399 MAIN ST
RIVERSIDE, CA

EDR US Hist Auto Stat **1009019732**
N/A

Site 7 of 10 in cluster F

Relative:
Higher

Actual:
839 ft.

EDR Historical Auto Stations:

Name:	CUNNISON & PILCH
Year:	1930
Type:	GASOLINE AND OIL SERVICE STATIONS
Name:	WOLFE CARL
Year:	1936
Type:	GAS AND OIL SERVICE STATIONS
Name:	SMILEY H L
Year:	1939
Type:	GAS AND OIL SERVICE STATIONS
Name:	TUCKER J M
Year:	1951
Type:	GASOLINE STATIONS

F74
East
< 1/8
0.083 mi.
440 ft.

4399 MAIN ST
RIVERSIDE, CA 92501

EDR US Hist Auto Stat **1009019696**
N/A

Site 8 of 10 in cluster F

Relative:
Higher

Actual:
839 ft.

EDR Historical Auto Stations:

Name:	BADER RAY
Year:	1936
Type:	AUTOMOBILE REPAIRING
Name:	INSTA TUNE
Year:	1999
Address:	4399 MAIN ST
Name:	INSTA TUNE
Year:	2000
Address:	4399 MAIN ST
Name:	INSTA TUNE
Year:	2001
Address:	4399 MAIN ST
Name:	INSTA TUNE

(Continued) **1009019696**

Year: 2002
Address: 4399 MAIN ST

Name: INSTA TUNE
Year: 2003
Address: 4399 MAIN ST

Name: INSTA TUNE & LUBE
Year: 2004
Address: 4399 MAIN ST

Name: INSTA TUNE
Year: 2007
Address: 4399 MAIN ST

Name: INSTA TUNE
Year: 2008
Address: 4399 MAIN ST

Name: INSTA TUNE
Year: 2009
Address: 4399 MAIN ST

Name: UNITED AUTO REPAIR
Year: 2010
Address: 4399 MAIN ST

Name: UNITED AUTO REPAIR
Year: 2011
Address: 4399 MAIN ST

Name: UNITED AUTO REPAIR
Year: 2012
Address: 4399 MAIN ST

75
WSW
< 1/8
0.084 mi.
441 ft.

COMPUTERIZED DIAGNOSTIC IMAGIN
4646 BROCKTON AVE
RIVERSIDE, CA 92506

RCRA-SQG **1001126624**
FINDS **CAR000016899**
HAZNET

Relative:
Lower

Actual:
811 ft.

RCRA-SQG:
Date form received by agency: 12/16/1996
Facility name: COMPUTERIZED DIAGNOSTIC IMAGIN
Facility address: 4646 BROCKTON AVE
RIVERSIDE, CA 92506
EPA ID: CAR000016899
Mailing address: 14TH ST STE 109
RIVERSIDE, CA 92501
Contact: DENISE LESLIE
Contact address: 4000 14TH ST STE 109
RIVERSIDE, CA 92501
Contact country: US
Contact telephone: (909) 276-7500
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous

COMPUTERIZED DIAGNOSTIC IMAGIN (Continued) **1001126624**

waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	COMPUTERIZED DIAGNOSTIC IMAGIN
Owner/operator address:	2020 IOWA AVE STE A 103 RIVERSIDE, CA 92507
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 781-2270
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002915383

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Year:	2001
Gepaid:	CAR000016899
Contact:	DENISE LESLIE DIRECTOR IMG SER
Telephone:	9092767500
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009

COMPUTERIZED DIAGNOSTIC IMAGIN (Continued) **1001126624**

Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	0.45
Facility County:	Riverside

Year:	2000
Gepaid:	CAR000016899
Contact:	DENISE LESLIE DIRECTOR IMG SER
Telephone:	9092767500
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	0.45
Facility County:	Riverside

Year:	2000
Gepaid:	CAR000016899
Contact:	DENISE LESLIE DIRECTOR IMG SER
Telephone:	9092767500
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	0.45
Facility County:	Riverside

Year:	1999
Gepaid:	CAR000016899
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	1.8553
Facility County:	Riverside

Year:	1998
Gepaid:	CAR000016899
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270

COMPUTERIZED DIAGNOSTIC IMAGIN (Continued) **1001126624**

Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	1.5427
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

G76 **4293 MARKET** **US BROWNFIELDS** **1010698690**
ENE **4293 MARKET** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.087 mi.
458 ft. **Site 11 of 16 in cluster G**

Relative:
Higher

Actual:
834 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4293 MARKET
Property #:	215261007
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.977866
Longitude:	-117.378992
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64992
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Sam J & Margaret J Miceli
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported

4293 MARKET (Continued) **1010698690**

IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	N
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

4293 MARKET (Continued) **1010698690**

Registry ID: 110038717341

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F77 **MOORE CLIFFORD** **EDR US Hist Auto Stat** **1009019410**
East **4380 MAIN ST** **N/A**
< 1/8 **RIVERSIDE, CA**
0.089 mi.
470 ft. **Site 9 of 10 in cluster F**

Relative:
Higher

Actual:
840 ft.

EDR Historical Auto Stations:

Name: BRITTAIN & SMITH
Year: 1936
Type: GAS AND OIL SERVICE STATIONS

Name: BRITTAIN & SMITH
Year: 1939
Type: GAS AND OIL SERVICE STATIONS

Name: MOORE CLIFFORD
Year: 1951
Type: GASOLINE STATIONS

G78 **4282 MARKET** **US BROWNFIELDS FINDS** **1010695935**
ENE **4282 MARKET** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.094 mi.
497 ft. **Site 12 of 16 in cluster G**

Relative:
Higher

Actual:
836 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4282 MARKET
Property #:	215262018
Parcel size:	0.6
Property Description:	Commercial
Latitude:	33.977814
Longitude:	-117.378656
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65035
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported

4282 MARKET (Continued) **1010695935**

Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Fairfield Home Inc.
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported

4282 MARKET (Continued) **1010695935**

Cleanup other description: Not reported
Num. of cleanup and re-dev. jobs: Not reported
Past use greenspace acreage: Not reported
Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717760

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F79 **4353 MAIN** **US BROWNFIELDS** **1010698411**
East **4353 MAIN** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.095 mi.
499 ft. **Site 10 of 10 in cluster F**

Relative:
Higher

Actual:
839 ft.

US BROWNFIELDS:
Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 4353 MAIN
Property #: 215272006
Parcel size: 0.33
Property Description: Commercial
Latitude: 33.976653
Longitude: -117.378174
HCM label: Not reported
Map scale: Not reported
Point of reference: Not reported
Datum: Not reported
ACRES property ID: 64962
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 400
Assessment funding source: US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: Not reported
Cleanup funding entity: Not reported
Grant type: N/A

4353 MAIN (Continued) **1010698411**

Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John J Monjazi
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported

4353 MAIN (Continued) **1010698411**

Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038716878

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

G80 **4271 MARKET** **US BROWNFIELDS** **1010698689**
ENE **4271 MARKET** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.102 mi.
541 ft. **Site 13 of 16 in cluster G**

Relative:
Higher

Actual:
836 ft.

US BROWNFIELDS:
Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 4271 MARKET
Property #: 215261006
Parcel size: 0.18
Property Description: Commercial
Latitude: 33.978037
Longitude: -117.378879
HCM label: Not reported
Map scale: Not reported
Point of reference: Not reported
Datum: Not reported
ACRES property ID: 64991
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 400
Assessment funding source: US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: Not reported
Cleanup funding entity: Not reported
Grant type: N/A
Accomplishment type: Phase I Environmental Assessment
Accomplishment count: 1
Cooperative agreement #: 96986301
Ownership entity: Not reported
Current owner: Sam J & Margaret J Miceli

4271 MARKET (Continued) **1010698689**

Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	N
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported

4271 MARKET (Continued) **1010698689**

Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717332

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

G81 ENE < 1/8 0.102 mi. 541 ft. **RIVERSIDE PRODUCE COMPANY** **LUST** **U001576290**
4271 MARKET ST **HIST UST** **N/A**
RIVERSIDE, CA 92501

Site 14 of 16 in cluster G

Relative: Higher

Actual: 836 ft.

LUST:

Region:	STATE
Global Id:	T0606503270
Latitude:	33.978115
Longitude:	-117.379062
Case Type:	LUST Cleanup Site
Status:	Open - Remediation
Status Date:	04/17/2008
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	VJB
Local Agency:	Not reported
RB Case Number:	083304025T
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	City redevelopment site - widespread soil/GW impacts. High BTEX, non-oxygenate site. LPH recovery initiated. VES/AS ongoing, with high mass removal per quarter. Brownfield grant exhausted, remainder of C/U being funded by RRA. Recent directive for soil vapor survey/RA and CSB.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606503270
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Regulatory Activities:

Global Id:	T0606503270
Action Type:	ENFORCEMENT
Date:	08/24/2006

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/26/2006
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/18/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/25/2007
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 03/03/2009
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/08/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/09/2007
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/23/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/13/2007
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/07/2007
Action: Meeting

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/08/2007
Action: Other Report / Document

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2008
Action: Remedial Progress Report

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/30/2009
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/29/2009
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/08/2006
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/11/2007
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2010
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/07/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/07/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/11/2010
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/02/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Date: 04/11/2006
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/18/2006
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/24/2006
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/13/2006
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 12/12/2007
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2009
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/17/2008
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/02/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 03/04/2011
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/05/2010
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/16/2007
Action: Verbal Enforcement

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/24/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/15/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/21/2012
Action: Meeting

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2010
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 08/08/2008
Action: Correspondence

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/01/2009
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/01/2010
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/01/2011
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/25/2007
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Date: 05/05/2008
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/16/2008
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/16/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/03/2012
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 03/22/2012
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/30/2007
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 12/03/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/17/2006
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/16/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/11/2009
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2010
Action: Remedial Progress Report

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: RESPONSE
Date: 11/17/2008
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2008
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2008
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 12/04/2008
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/31/2011
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/31/2011
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2011
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/07/2013
Action: Staff Letter

Global Id: T0606503270
Action Type: RESPONSE
Date: 12/31/2007
Action: Final Remedial Action Report / Corrective Action Report

Global Id: T0606503270
Action Type: RESPONSE

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Date: 03/14/2012
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/09/2006
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/30/2008
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/04/2010
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/06/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2006
Action: Well Installation Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 05/07/2007
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 08/25/2009
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2009
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 12/02/2008
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/13/2009
Action: Staff Letter

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/05/2009
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/17/2009
Action: Meeting

Global Id: T0606503270
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/06/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/30/2007
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/26/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/18/2011
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 12/11/2008
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 09/30/2009
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 08/31/2009
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Date: 08/30/2012
Action: Other Report / Document

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/14/2008
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/10/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/26/2007
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/25/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/31/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/17/2008
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/12/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 12/16/2008
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2010
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/11/2010
Action: Staff Letter

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/15/2009
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/01/2009
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/11/2009
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/08/2008
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/19/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/27/2009
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/22/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 03/03/2009
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/24/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/03/2008
Action: File review

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

HIST UST:

Region:	STATE
Facility ID:	00000067789
Facility Type:	Other
Other Type:	JOBBER
Total Tanks:	0001
Contact Name:	Not reported
Telephone:	7146836420
Owner Name:	SAM MICELI
Owner Address:	4271 MARKET STREET
Owner City,St,Zip:	RIVERSIDE, CA 92501
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	6E
Tank Construction:	Unkown gauge
Leak Detection:	None

I82 **4329 MAIN** **US BROWNFIELDS** **1010698410**
East **4329 MAIN** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.103 mi.
546 ft. **Site 1 of 9 in cluster I**

Relative:
Higher

Actual:
839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4329 MAIN
Property #:	215272005
Parcel size:	0.25
Property Description:	Commercial
Latitude:	33.976834
Longitude:	-117.378052
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64961
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1

4329 MAIN (Continued) **1010698410**

Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John J Monjazi
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported

4329 MAIN (Continued) **1010698410**

Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038716869

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

G83 ENE < 1/8 0.105 mi. 556 ft. **SHERWIN-WILLIAMS CO**
4267 MARKET ST
RIVERSIDE, CA 92501
RCRA-SQG FINDS HAZNET **1000371812 CAT000619221**

Site 15 of 16 in cluster G

Relative: Higher

Actual: 836 ft.

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: SHERWIN-WILLIAMS CO
Facility address: 4267 MARKET ST
RIVERSIDE, CA 92501
EPA ID: CAT000619221
Mailing address: MARKET ST
RIVERSIDE, CA 92501
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: SHERWIN-WILLIAMS CO
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED

SHERWIN-WILLIAMS CO (Continued) **1000371812**

NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002944128

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
Year: 1993
Gepaid: CAT000619221
Contact: SHERWIN-WILLIAMS CO
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 4267 MARKET ST
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: Not reported
TSD EPA ID: CAD008302903
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Recycler
Tons: 0.68799999999
Facility County: Riverside

G84 ENE < 1/8 0.105 mi. 556 ft. | **4267 MARKET 4267 MARKET RIVERSIDE, CA 92501** | **US BROWNFIELDS FINDS** | **1010698688 N/A**

Site 16 of 16 in cluster G

Relative: Higher

Actual: 836 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4267 MARKET
Property #:	215261005
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.978068
Longitude:	-117.378858
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64990
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Elmer & Jean D Hankins
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4267 MARKET (Continued) **1010698688**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717323

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

I85 East < 1/8 0.112 mi. 594 ft. — **HURLEY P H**, **4310 MAIN ST**, **RIVERSIDE, CA** — **EDR US Hist Cleaners** — **1009145520** / **N/A**

Site 2 of 9 in cluster I

Relative: Higher

Actual: 840 ft.

EDR Historical Cleaners:

Name:	HURLEY P H
Year:	1945
Type:	FAMILY LAUNDRY WORK

I86 East < 1/8 0.112 mi. 594 ft. — **BLOCH D R**, **4310 MAIN ST**, **RIVERSIDE, CA** — **EDR US Hist Auto Stat** — **1009022033** / **N/A**

Site 3 of 9 in cluster I

Relative: Higher

Actual: 840 ft.

EDR Historical Auto Stations:

Name:	JONES THOS B UNXON SERVICE
Year:	1939
Type:	GAS AND OIL SERVICE STATIONS
Name:	BLOCH D R
Year:	1951
Type:	GASOLINE STATIONS

I87 East < 1/8 0.113 mi. 596 ft. — **4307 MAIN**, **4307 MAIN**, **RIVERSIDE, CA 92501** — **US BROWNFIELDS FINDS** — **1010695934** / **N/A**

Site 4 of 9 in cluster I

Relative: Higher

Actual: 840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4307 MAIN
Property #:	215272004
Parcel size:	0.23
Property Description:	Commercial
Latitude:	33.976999
Longitude:	-117.37794
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65043
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported

4307 MAIN (Continued) **1010695934**

Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Christopher S Robertson
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported

4307 MAIN (Continued) **1010695934**

Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717840

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

I88 **4295 MAIN** **US BROWNFIELDS** **1010695689**
East **4295 MAIN** **FINDS** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.121 mi.
638 ft. **Site 5 of 9 in cluster I**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4295 MAIN
Property #:	215262010
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.977275
Longitude:	-117.377739
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65032
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301

4295 MAIN (Continued) **1010695689**

Ownership entity:	Not reported
Current owner:	J F & James F Davidson
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported

4295 MAIN (Continued) **1010695689**

Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717733

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

I89 **4281 MAIN** **US BROWNFIELDS** **1010695927**
ENE **4281 MAIN** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.128 mi.
677 ft. **Site 6 of 9 in cluster I**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4281 MAIN
Property #:	215262014
Parcel size:	0.09
Property Description:	Commercial
Latitude:	33.977389
Longitude:	-117.377679
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65033
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Richard P Faulkner & James E Egan
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported

4281 MAIN (Continued) **1010695927**

Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

4281 MAIN (Continued) **1010695927**

FINDS:

Registry ID: 110038717742

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

I90 **ROBHMAN BARBARA** **EDR US Hist Cleaners** **1009144153**
ENE **4277 MAIN ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.130 mi.
689 ft. **Site 7 of 9 in cluster I**

Relative:
Higher

Actual:
840 ft.

EDR Historical Cleaners:

Name:	ROBHMAN BARBARA
Year:	1930
Type:	CLOTHES PRESSERS AND CLEANERS
Name:	WHITEHURST R C
Year:	1939
Type:	CLOTHES PRESSERS AND CLEANERS CONT

J91 **4225 MARKET** **US BROWNFIELDS** **1010698678**
ENE **4225 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.136 mi.
716 ft. **Site 1 of 18 in cluster J**

Relative:
Higher

Actual:
839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4225 MARKET
Property #:	215261004
Parcel size:	0.65
Property Description:	Commercial
Latitude:	33.978394
Longitude:	-117.378643
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64989
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported

4225 MARKET (Continued) **1010698678**

Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Amy P & Raymond J Clark
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported

4225 MARKET (Continued) **1010698678**

Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717314

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

I92 **4267 MAIN** **US BROWNFIELDS** **1010695688**
ENE **4267 MAIN** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.136 mi.
718 ft. **Site 8 of 9 in cluster I**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4267 MAIN
Property #:	215262009
Parcel size:	Not reported
Property Description:	Commercial
Latitude:	33.977497
Longitude:	-117.377606
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65031
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1

4267 MAIN (Continued) **1010695688**

Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Mario & Rosa Maria Cortez
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported

4267 MAIN (Continued) **1010695688**

Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717724

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

I93 **4261 MAIN** **US BROWNFIELDS** **1010695687**
ENE **4261 MAIN** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.139 mi.
736 ft. **Site 9 of 9 in cluster I**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4261 MAIN
Property #:	215262008
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.977544
Longitude:	-117.377575
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65030
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Blueskyland
Did owner change:	Not reported
Cleanup required:	Not reported

4261 MAIN (Continued) **1010695687**

Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

4261 MAIN (Continued) **1010695687**

FINDS:

Registry ID: 110038717715

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

K94 **4255 MAIN** **US BROWNFIELDS** **1010695686**
ENE **4255 MAIN** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.143 mi.
753 ft. **Site 1 of 8 in cluster K**

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4255 MAIN
Property #:	215262007
Parcel size:	0.16
Property Description:	Commercial
Latitude:	33.97759
Longitude:	-117.377544
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65029
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ivan C & Vivian M Metschke
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported

4255 MAIN (Continued) **1010695686**

IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717706

Environmental Interest/Information System

4255 MAIN (Continued) **1010695686**

US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J95 **ALLEN FRANK** **EDR US Hist Auto Stat** **1009023451**
ENE **4214 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.143 mi.
755 ft. **Site 2 of 18 in cluster J**

Relative:
Higher

Actual:
841 ft.

EDR Historical Auto Stations:

Name:	ALLEN FRANK
Year:	1951
Type:	AUTOMOBILE REPAIRING

J96 **4212 MARKET** **US BROWNFIELDS FINDS** **1010695680**
ENE **4212 MARKET** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.145 mi.
763 ft. **Site 3 of 18 in cluster J**

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4212 MARKET
Property #:	215262001
Parcel size:	Not reported
Property Description:	Commercial
Latitude:	33.978358
Longitude:	-117.378297
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65023
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Richard Paul Bozner & Candyce Elene Trust
Did owner change:	Not reported

4212 MARKET (Continued) **1010695680**

Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported

4212 MARKET (Continued) **1010695680**

Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717644

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J97 **STEPANEK H W** **EDR US Hist Cleaners** **1009146955**
ENE **4212 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.145 mi.
763 ft. **Site 4 of 18 in cluster J**

Relative:
Higher

Actual:
841 ft.

EDR Historical Cleaners:
Name: STEPANEK H W
Year: 1945
Type: FAMILY LAUNDRY WORK

J98 **HOLMES LE ROY** **EDR US Hist Auto Stat** **1009019691**
ENE **4212 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.145 mi.
763 ft. **Site 5 of 18 in cluster J**

Relative:
Higher

Actual:
841 ft.

EDR Historical Auto Stations:
Name: SUNSET PACIFIC OIL CO
Year: 1930
Type: GASOLINE AND OIL SERVICE STATIONS

Name: BELL BROTHERS
Year: 1936
Type: GAS AND OIL SERVICE STATIONS

Name: HOLMES LE ROY
Year: 1939
Type: GAS AND OIL SERVICE STATIONS

Name: MOWBRAY C G
Year: 1945
Type: AUTOMOBILE REPAIRING

Name: CASPERS MOBIL SERVICE
Year: 1951
Type: GASOLINE STATIONS

K99 ENE 1/8-1/4 0.152 mi. 803 ft. | **THOMAS F CLARE INC** | **EDR US Hist Auto Stat** | **1009018739** | **N/A**
4240 MAIN ST
RIVERSIDE, CA

Site 2 of 8 in cluster K

Relative: Higher

Actual: 842 ft.

EDR Historical Auto Stations:

Name:	THOMAS F CLARE INC
Year:	1930
Type:	AUTO REPAIRING

L100 NE 1/8-1/4 0.154 mi. 811 ft. | **3882 12TH** | **US BROWNFIELDS FINDS** | **1010698679** | **N/A**
3882 12TH
RIVERSIDE, CA 92501

Site 1 of 5 in cluster L

Relative: Higher

Actual: 835 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3882 12TH
Property #:	215261013
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.978915
Longitude:	-117.379289
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64993
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John P Elliott
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported

3882 12TH (Continued) **1010698679**

IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717350

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES)
is an federal online database for Brownfields Grantees to

3882 12TH (Continued) **1010698679**

electronically submit data directly to EPA.

L101 **3878 12TH** **US BROWNFIELDS** **1010698677**
NE **3878 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.154 mi.
811 ft. **Site 2 of 5 in cluster L**

Relative:
Higher

Actual:
835 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3878 12TH
Property #:	215261002
Parcel size:	0.07
Property Description:	Commercial
Latitude:	33.978897
Longitude:	-117.379251
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64988
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John P Elliott
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported

3878 12TH (Continued) **1010698677**

Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717305

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J102 **3868 12TH** **US BROWNFIELDS** **1010698680**
NE **3868 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.154 mi.
812 ft. **Site 6 of 18 in cluster J**

Relative:
Higher

Actual:
835 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3868 12TH
Property #:	215261014
Parcel size:	0.64
Property Description:	Commercial
Latitude:	33.978854
Longitude:	-117.379157
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64994
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Amy P & Raymond J Clark
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3868 12TH (Continued) **1010698680**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717369

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

L103 **3895 12TH** **US BROWNFIELDS** **1010698673**
NE **3895 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.155 mi.
821 ft. **Site 3 of 5 in cluster L**

Relative:
Higher

Actual:
835 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3895 12TH
Property #:	215251010
Parcel size:	0.13
Property Description:	Commercial
Latitude:	33.979194
Longitude:	-117.379251
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64984
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John N & Carolyn E Aquilina
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3895 12TH (Continued) **1010698673**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717261

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

L104 NE 1/8-1/4 0.156 mi. 822 ft. | **3877 12TH**
3877 12TH
RIVERSIDE, CA 92501

Site 4 of 5 in cluster L

US BROWNFIELDS FINDS | **1010698676**
N/A

Relative: Higher

Actual: 835 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3877 12TH
Property #:	215251014
Parcel size:	0.28
Property Description:	Commercial
Latitude:	33.979124
Longitude:	-117.379075
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64987
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Vincent P Nolan & Frank S Peasley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3877 12TH (Continued) **1010698676**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717298

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J105 **3780 12TH** **US BROWNFIELDS** **1010695681**
ENE **3780 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.156 mi.
822 ft. **Site 7 of 18 in cluster J**

Relative:
Higher

Actual:
843 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3780 12TH
Property #:	215262002
Parcel size:	0.12
Property Description:	Commercial
Latitude:	33.978354
Longitude:	-117.37807
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65024
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	E L S Inv Clyde Smith
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3780 12TH (Continued) **1010695681**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717653

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J106 **3843 12TH** **US BROWNFIELDS** **1010698672**
NE **3843 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.156 mi.
823 ft. **Site 8 of 18 in cluster J**

Relative:
Higher

Actual:
837 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3843 12TH
Property #:	215251006
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.978978
Longitude:	-117.378755
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64983
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Sherry Lee Collins
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3843 12TH (Continued) **1010698672**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717252

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J107 **3770 12TH** **US BROWNFIELDS** **1010695682**
ENE **3770 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.157 mi.
829 ft. **Site 9 of 18 in cluster J**

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3770 12TH
Property #:	215262003
Parcel size:	0.12
Property Description:	Commercial
Latitude:	33.978307
Longitude:	-117.377969
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65025
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	E L S Inv Clyde Smith
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3770 12TH (Continued) **1010695682**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717662

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J108 NE 1/8-1/4 0.157 mi. 831 ft. | **FIRESTONE STORES #2768** | **CA FID UST** | **S101618658**
4199 MARKET ST | **SWEEPS UST** | **N/A**
RIVERSIDE, CA 91501

Site 10 of 18 in cluster J

Relative: Higher

Actual: 840 ft.

CA FID UST:

Facility ID:	33002651
Regulated By:	UTNKA
Regulated ID:	00018334
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7146864465
Mail To:	Not reported
Mailing Address:	333 FLINT ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 91501
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	18334
Number:	1
Board Of Equalization:	44-018048
Referral Date:	10-29-92
Action Date:	10-29-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	001372
Swrcb Tank Id:	33-000-018334-000001
Actv Date:	10-29-92
Capacity:	550
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL
Number Of Tanks:	1

J109 NE 1/8-1/4 0.157 mi. 831 ft. | **FIRESTONE AUTO SUPPLY & SERVICE STORES** | **EDR US Hist Auto Stat** | **1009021434**
4199 MARKET | **N/A**
RIVERSIDE, CA

Site 11 of 18 in cluster J

Relative: Higher

Actual: 840 ft.

EDR Historical Auto Stations:

Name:	FIRESTONE AUTO SUPPLY & SERVICE STORES
Year:	1936
Type:	GAS AND OIL SERVICE STATIONS
Name:	FIRESTONE TIRE & SERVICE CNTR
Year:	2001
Address:	4199 MARKET ST
Name:	FIRESTONE TIRE & SERVICE CNTR

FIRESTONE AUTO SUPPLY & SERVICE STORES (Continued) **1009021434**

Year: 2002
Address: 4199 MARKET ST

Name: FIRESTONE TIRE & SERVICE CTR
Year: 2004
Address: 4199 MARKET ST

J110 **FIRESTONE STORES #2768** **HIST UST** **U001568314**
NE **4199 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 91501**
0.157 mi.
831 ft. **Site 12 of 18 in cluster J**

Relative:
Higher

Actual:
840 ft.

HIST UST:
Region: STATE
Facility ID: 00000018334
Facility Type: Other
Other Type: AUTO SERVICE CENTER
Total Tanks: 0001
Contact Name: BILL TAYLOR
Telephone: 7146864465
Owner Name: FIRESTONE TIRE & RUBBER CO
Owner Address: 1200 FIRESTONE PARKWAY
Owner City,St,Zip: AKRON, OH 44317

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: None

J111 **4199 MARKET** **US BROWNFIELDS** **1010698671**
NE **4199 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.157 mi.
831 ft. **Site 13 of 18 in cluster J**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:
Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 4199 MARKET
Property #: 215251005
Parcel size: 0.39
Property Description: Commercial
Latitude: 33.97877
Longitude: -117.37834
HCM label: Not reported
Map scale: Not reported
Point of reference: Not reported
Datum: Not reported
ACRES property ID: 64982
Start date: Not reported
Completed date: Not reported

4199 MARKET (Continued) **1010698671**

Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Lavonne F Heinsen, James R Daughters & Ken Daughte
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	Y
Sediments found:	Not reported

4199 MARKET (Continued) **1010698671**

Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Y
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	Y
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717243

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J112 **WESTENHAVER & WOOD** **EDR US Hist Auto Stat** **1009019694**
ENE **4198 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.158 mi.
832 ft. **Site 14 of 18 in cluster J**

Relative: Higher

Actual: 841 ft.

EDR Historical Auto Stations:

Name:	WESTENHAVER & WOOD
Year:	1930
Type:	GASOLINE AND OIL SERVICE STATIONS

K113 **4229 MAIN** **US BROWNFIELDS FINDS** **1010695685**
ENE **4229 MAIN** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.158 mi.
836 ft. **Site 3 of 8 in cluster K**

Relative: Higher

Actual: 842 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4229 MAIN
Property #:	215262006
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.977791
Longitude:	-117.37741

4229 MAIN (Continued) **1010695685**

HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65028
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ivan C & Vivian M Metschke
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported

4229 MAIN (Continued) **1010695685**

PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717699

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J114 **3760 12TH** **US BROWNFIELDS** **1010695683**
ENE **3760 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.159 mi.
839 ft. **Site 15 of 18 in cluster J**

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3760 12TH
Property #:	215262004
Parcel size:	0.12
Property Description:	Commercial
Latitude:	33.97826
Longitude:	-117.377868
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65026

3760 12TH (Continued) **1010695683**

Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	E L S Inv Clyde Smith
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N

3760 12TH (Continued) **1010695683**

Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717671

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

K115 **EDR US Hist Cleaners** **1015050997**
ENE **3732 12TH ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.166 mi.
875 ft. **Site 4 of 8 in cluster K**

Relative:
Higher

Actual:
845 ft.

EDR Historical Cleaners:

Name:	TWELFTH STREET CLNR & LNDRY
Year:	2001
Address:	3732 12TH ST

K116 **3732 12TH** **US BROWNFIELDS FINDS** **1010695684**
ENE **3732 12TH** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.166 mi.
875 ft. **Site 5 of 8 in cluster K**

Relative:
Higher

Actual:
845 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3732 12TH
Property #:	215262005
Parcel size:	0.12
Property Description:	Commercial

3732 12TH (Continued) **1010695684**

Latitude:	33.978128
Longitude:	-117.377585
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65027
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Hae Kwan & Oh Bok Yang
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported

3732 12TH (Continued) **1010695684**

Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717680

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

K117 **TWELFTH ST. CLEANERS** **DRYCLEANERS** **S106077066**
ENE **3732 - 12TH ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.166 mi.
875 ft. **Site 6 of 8 in cluster K**

Relative:
Higher

Actual:
845 ft.

DRYCLEANERS:

EPA Id:	CAL000269197
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	04/17/2003
Facility Active:	No
Inactive Date:	06/30/2007
Facility Addr2:	Not reported
Owner Name:	GEE SON CORP
Owner Address:	3732 12TH ST

TWELFTH ST. CLEANERS (Continued) **S106077066**

Owner Address 2: Not reported
Owner Telephone: 9516833525
Contact Name: JEE SUN CHOI PRESIDENT
Contact Address: 26613 TANAGER COURT
Contact Address 2: Not reported
Contact Telephone: 9518054075

K118
ENE
1/8-1/4
0.166 mi.
878 ft.

DEMPSEY S LAUNDROMAT
3730 12TH ST
RIVERSIDE, CA

EDR US Hist Cleaners **1009145782**
N/A

Site 7 of 8 in cluster K

Relative:
Higher

Actual:
845 ft.

EDR Historical Cleaners:
Name: DEMPSEY S LAUNDROMAT
Year: 1951
Type: LAUNDRIES SELF SERVE

K119
ENE
1/8-1/4
0.168 mi.
888 ft.

4213 MAIN
4213 MAIN
RIVERSIDE, CA 92501

US BROWNFIELDS FINDS **1010695928**
N/A

Site 8 of 8 in cluster K

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:
Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 4213 MAIN
Property #: 215262015
Parcel size: 0.15
Property Description: Commercial
Latitude: 33.977917
Longitude: -117.377319
HCM label: Not reported
Map scale: Not reported
Point of reference: Not reported
Datum: Not reported
ACRES property ID: 65034
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 400
Assessment funding source: US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: Not reported
Cleanup funding entity: Not reported
Grant type: N/A
Accomplishment type: Phase I Environmental Assessment
Accomplishment count: 1
Cooperative agreement #: 96986301
Ownership entity: Not reported

4213 MAIN (Continued) **1010695928**

Current owner:	Debbie S Marquez
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported

4213 MAIN (Continued) **1010695928**

Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717751

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

M120 **ASSOCIATED NATIONAL MORTGAGE** **LUST** **S101300563**
NNW **4279 EL DORADO ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.169 mi.
893 ft. **Site 1 of 4 in cluster M**

Relative:
Higher

Actual:
832 ft.

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083301365T
Local Case Num:	88887
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Vapor Extraction
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0606500165
How Stopped Date:	Not reported
Enter Date:	12/6/1989
Review Date:	Not reported
Prelim Assess:	12/7/1989
Discover Date:	Not reported
Enforcement Date:	Not reported
Close Date:	9/5/1995
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	6/10/1992
Monitoring:	Not reported
Enter Date:	12/6/1989
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported

ASSOCIATED NATIONAL MORTGAGE (Continued) **S101300563**

Oversite Program:	LUST
Latitude:	33.979792
Longitude:	-117.3845916
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	RS
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

M121 **ASSOCIATED NATIONAL MORTG** **HIST CORTESE** **S105025873**
NNW **4279 EL DORADO** **LUST** **N/A**
1/8-1/4 **RIVERDALE, CA 92501**
0.169 mi.
893 ft. **Site 2 of 4 in cluster M**

Relative:
Higher

Actual:
832 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083301365T

LUST:

Region:	STATE
Global Id:	T0606500165
Latitude:	33.979999
Longitude:	-117.384544
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/05/1995
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	SCB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083301365T
LOC Case Number:	88887
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500165
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP

ASSOCIATED NATIONAL MORTG (Continued) **S105025873**

Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email: sbolting@rivcocha.org
Phone Number: 9519558982

Global Id: T0606500165
Contact Type: Regional Board Caseworker
Contact Name: ROSE SCOTT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: rscott@waterboards.ca.gov
Phone Number: 9513206375

Regulatory Activities:

Global Id: T0606500165
Action Type: ENFORCEMENT
Date: 09/04/1995
Action: File review - #RCDEH Upload Site File 4/5/2010

Global Id: T0606500165
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500165
Action Type: ENFORCEMENT
Date: 09/05/1995
Action: Closure/No Further Action Letter - #RCDEH0905

Global Id: T0606500165
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

RIVERSIDE CO. LUST:

Region: RIVERSIDE
Facility ID: 88887
Employee: Boltinghous-LOP
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed

J122 **MONTGOMERY W D** **EDR US Hist Auto Stat** **1009023559**
NE **4176 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.173 mi.
916 ft. **Site 16 of 18 in cluster J**

Relative:
Higher

Actual:
842 ft.

EDR Historical Auto Stations:

Name: MONTGOMERY W D
Year: 1951
Type: GASOLINE STATIONS

J123 NE 1/8-1/4 0.173 mi. 916 ft. — **GATES H R**, **4176 MARKET ST**, **RIVERSIDE, CA** — **EDR US Hist Cleaners** — **1009145509** / **N/A**

Site 17 of 18 in cluster J

Relative: Higher
Actual: 842 ft.

EDR Historical Cleaners:

Name:	GATES H R
Year:	1945
Type:	FAMILY LAUNDRY WORK

J124 NE 1/8-1/4 0.175 mi. 924 ft. — **LOWE R J**, **4174 MARKET ST**, **RIVERSIDE, CA** — **EDR US Hist Auto Stat** — **1009020189** / **N/A**

Site 18 of 18 in cluster J

Relative: Higher
Actual: 842 ft.

EDR Historical Auto Stations:

Name:	SMITH & PATTISON
Year:	1936
Type:	AUTOMOBILE REPAIRS
Name:	SMITH & PATTISON
Year:	1939
Type:	AUTOMOBILE REPAIRING
Name:	LOWE R J
Year:	1939
Type:	GAS AND OIL SERVICE STATIONS

L125 NE 1/8-1/4 0.180 mi. 948 ft. — **4166 ALMOND**, **4166 ALMOND**, **RIVERSIDE, CA 92501** — **US BROWNFIELDS FINDS** — **1010698674** / **N/A**

Site 5 of 5 in cluster L

Relative: Higher
Actual: 836 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4166 ALMOND
Property #:	215251011
Parcel size:	0.07
Property Description:	Commercial
Latitude:	33.979444
Longitude:	-117.379111
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64985
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported

4166 ALMOND (Continued) **1010698674**

Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Mary E Daniels
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N

4166 ALMOND (Continued) **1010698674**

VOCs cleaned: Not reported
Cleanup other description: Not reported
Num. of cleanup and re-dev. jobs: Not reported
Past use greenspace acreage: Not reported
Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717270

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

N126 **COUNTY GARAGE (RIVERSIDE)** **HIST CORTESE** **S101589849**
East **4293 ORANGE ST** **LUST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501** **CA FID UST**
0.186 mi. **SWEEPS UST**
980 ft. **Site 1 of 4 in cluster N** **EMI**

Relative:
Higher

Actual:
852 ft.

CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 083301572T

LUST REG 8:
Region: 8
County: Riverside
Regional Board: Santa Ana Region
Facility Status: Remedial action (cleanup) Underway
Case Number: 083301572T
Local Case Num: 90539
Case Type: Aquifer affected
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Vapor Extraction
Cross Street: 12TH
Enf Type: SEL
Funding: Not reported
How Discovered: Nuisance Conditions
How Stopped: Not reported
Leak Cause: Corrosion
Leak Source: Piping
Global ID: T0606500194
How Stopped Date: Not reported
Enter Date: 6/26/1990

COUNTY GARAGE (RIVERSIDE) (Continued) **S101589849**

Review Date:	Not reported
Prelim Assess:	6/28/1990
Discover Date:	6/14/1990
Enforcement Date:	1/1/1965
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	5/29/1992
Remed Action:	7/15/1993
Monitoring:	Not reported
Enter Date:	6/26/1990
GW Qualifies:	<
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9765612
Longitude:	-117.3764192
MTBE Date:	3/5/1999
Max MTBE GW:	10
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	B
Staff:	RS
Staff Initials:	SCB
Lead Agency:	Regional Board
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	33000275
Regulated By:	UTNKA
Regulated ID:	00064692
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7147876322
Mail To:	Not reported
Mailing Address:	4293 ORANGE ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 92501
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

COUNTY GARAGE (RIVERSIDE) (Continued) **S101589849**

SWEEPS UST:

Status:	Active
Comp Number:	64692
Number:	4
Board Of Equalization:	44-017841
Referral Date:	10-29-92
Action Date:	10-29-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	001055
Swrcb Tank Id:	33-000-064692-000001
Actv Date:	10-29-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	5

Status:	Active
Comp Number:	64692
Number:	4
Board Of Equalization:	44-017841
Referral Date:	10-29-92
Action Date:	10-29-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	001055
Swrcb Tank Id:	33-000-064692-000002
Actv Date:	10-29-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	64692
Number:	4
Board Of Equalization:	44-017841
Referral Date:	10-29-92
Action Date:	10-29-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	001055
Swrcb Tank Id:	33-000-064692-000003
Actv Date:	10-29-92
Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	64692
Number:	4
Board Of Equalization:	44-017841
Referral Date:	10-29-92

COUNTY GARAGE (RIVERSIDE) (Continued) **S101589849**

Action Date:	10-29-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	001055
Swrcb Tank Id:	33-000-064692-000004
Actv Date:	10-29-92
Capacity:	300
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	64692
Number:	4
Board Of Equalization:	44-017841
Referral Date:	10-29-92
Action Date:	10-29-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	001055
Swrcb Tank Id:	33-000-064692-000005
Actv Date:	10-29-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	METHANOL
Number Of Tanks:	Not reported

EMI:

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	31717
Air District Name:	SC
SIC Code:	9621
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

N127 **RIVERSIDE CO G S A FLEET SVCS** **RCRA-SQG** **1000686136**
East **4293 ORANGE ST** **CAD983633629**
1/8-1/4 **RIVERSIDE, CA 92501**
0.186 mi.
980 ft. **Site 2 of 4 in cluster N**

Relative:
Higher

Actual:
852 ft.

RCRA-SQG:

Date form received by agency:	04/01/1992
Facility name:	RIVERSIDE CO G S A FLEET SVCS
Facility address:	4293 ORANGE ST

RIVERSIDE CO G S A FLEET SVCS (Continued) **1000686136**

RIVERSIDE, CA 92501
EPA ID: CAD983633629
Contact: WILLIAM OPPENHEIM
Contact address: 4293 ORANGE ST
RIVERSIDE, CA 92501
Contact country: US
Contact telephone: (714) 275-4690
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: RIVERSIDE CO G S A FLEET SVCC
Owner/operator address: 4293 ORANGE ST
RIVERSIDE, CA 92501
Owner/operator country: Not reported
Owner/operator telephone: (714) 275-4650
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

N128 **COUNTY OF RIVERSIDE FLEET SERVICES** **UST** **U003948869**
East **4293 ORANGE ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.186 mi.
980 ft. **Site 3 of 4 in cluster N**

Relative:
Higher

Actual:
852 ft.

UST:
Facility ID: 259
Latitude: 33.97669
Longitude: -117.37643

COUNTY OF RIVERSIDE FLEET SERVICES (Continued) **U003948869**

RIVERSIDE CO. UST:
Region: RIVERSIDE
Total Tanks: 4

N129
East
1/8-1/4
0.186 mi.
980 ft.

TRANSPORTATION CENTER (RIVERSI **LUST** **U001576297**
4293 ORANGE ST **HIST UST** **N/A**
RIVERSIDE, CA 92501

Site 4 of 4 in cluster N

Relative:
Higher

Actual:
852 ft.

LUST:

Region:	STATE
Global Id:	T0606500194
Latitude:	33.9765612
Longitude:	-117.3764192
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/01/2010
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	RS
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083301572T
LOC Case Number:	90539
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	An unauthorized release of gasoline occurred at the site. The release was discovered on June 14, 1990 in response to complaints of nuisance conditions created from a piping leak. Product was observed seeping out of cracks in the concrete surface. The piping leak was caused by corrosion of the piping section near the eastern dispenser island. Samples collected from the excavation repair trench on June 15, 1990 indicated 180,000 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons as gasoline (TPH-g) in soil at 6 feet. This represents the worst case conditions at the site prior to remediation as shown on the table in Section III above. However, the samples were not analyzed for volatile organics. The piping leak was repaired with excavated soil returned as backfill. From August 14 to 24, 1990, a preliminary assessment was performed consisting of four vertical borings around the dispensers and one slant boring beneath the eastern dispenser piping (ESE, October 5, 1990). The highest concentrations of the detected aromatic volatile organic compounds: benzene, toluene, ethylbenzene and xylenes (BTEX) are shown on the table in Section III above. Although these were the highest concentrations of BTEX detected, they may not represent the worst case conditions prior to remediation. For example, benzene was 240 mg/kg and the sample contained 8,000 mg/kg of TPH-g. The samples were not analyzed for the full suite of volatile organic compounds. In January and May 1992, corrective action plans were submitted. From January to November 1992, A Phase II Environmental Assessment was conducted that consisted of installing four vapor extraction wells, two vapor monitoring well clusters, three groundwater monitoring wells and several cone penetrometer borings, conducting a vapor extraction test and performing multiple phases of soil vapor sampling (ESE, January 18, 1993). The highest concentration of benzene detected was 1,200 micrograms per liter (lJg/l) in the groundwater sample collected from MW2 on November 28, 1992. The compound,

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

1,1,1-trichloroethane, was detected at its highest concentration represented on the table. In April 1993, one groundwater monitoring well and four vapor wells were installed (ESE, October 15, 1993). The wells were designed to meet additional assessment requirements and provide support to the existing vapor extraction system. Groundwater monitoring was conducted from November 1992 until May 2000. The groundwater beneath the site has ranged from a depth of approximately 60 to 77 feet below surface. Low levels (less than 50 micrograms per liter [lJg/l]) of chlorinated hydrocarbons have been detected in the groundwater historically at this site. The highest concentrations of TPH-g and benzene reported were 19,000 and 4,000 IJg/1 in December 1993. According to the groundwater monitoring report, dated May 30, 2000, TPH-g (410 IJg/I) and benzene (0.96 IJg/I) were detected in one well. No other fuel constituents were detected in groundwater in May of 2000. MtBE and the other fuel oxygenates have never been detected in groundwater. Post remedial groundwater monitoring was conducted on May 6, 2008. TPH-g and BTEX were not detected. Low levels of chlorinated compounds were detected at concentrations less than 5 IJg/1. Vapor extraction was conducted intermittently from September 1992 until May 10, 1999 (total operation period of 5 years and 4 months). This vapor extraction effort removed 3,336 pounds of hydrocarbon Riverside County Garage - 5 - July 1, 2010 vapors from the subsurface. During vapor extraction efforts, the highest concentration of benzene reported was 760 ppmv in August 1993 and the highest TPH-g was 15,000 ppmv in January 1994. During a 3-day vapor extraction test conducted in August 2000, neither benzene nor MTBE were detected in the vapor samples collected from the four vapor wells throughout the test. The highest concentration of TPH-g was 1,638 parts per million by volume ppmv. Since 1997, th

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500194
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375

Global Id:	T0606500194
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	sbolting@rivcocha.org
Phone Number:	9519558982

Regulatory Activities:

Global Id:	T0606500194
Action Type:	ENFORCEMENT
Date:	06/05/2003
Action:	Staff Letter

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 03/18/2006
Action: Verbal Enforcement

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/12/2010
Action: Staff Letter

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/05/2010
Action: Meeting

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/21/2010
Action: Staff Letter

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/21/2010
Action: Notification - Preclosure

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/22/2005
Action: * No Action

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/22/2005
Action: * No Action

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/19/2005
Action: * No Action

Global Id: T0606500194
Action Type: RESPONSE
Date: 07/15/2006
Action: Soil and Water Investigation Workplan

Global Id: T0606500194
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500194
Action Type: RESPONSE
Date: 03/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0606500194
Action Type: ENFORCEMENT

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

Date: 07/01/2010
Action: Closure/No Further Action Letter

Global Id: T0606500194
Action Type: RESPONSE
Date: 10/01/2005
Action: Soil and Water Investigation Report

Global Id: T0606500194
Action Type: RESPONSE
Date: 09/15/2005
Action: Soil and Water Investigation Workplan

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/28/2009
Action: File review

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 08/20/2009
Action: Verbal Enforcement

Global Id: T0606500194
Action Type: RESPONSE
Date: 07/11/2005
Action: Other Report / Document

Global Id: T0606500194
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500194
Action Type: RESPONSE
Date: 04/04/2005
Action: Other Report / Document

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 03/03/2003
Action: * Historical Enforcement

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/31/2003
Action: Staff Letter

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 04/30/2008
Action: Meeting

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 06/12/2008
Action: Staff Letter

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 06/05/2008
Action: Staff Letter

Global Id: T0606500194
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0606500194
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/01/2010
Action: Staff Letter

Global Id: T0606500194
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0606500194
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 03/12/2003
Action: * Verbal Communication

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/08/2009
Action: Technical Correspondence / Assistance / Other

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 90539
Employee: Boltinghous-LOP
Site Closed: Referred to Water Board
Case Type: Drinking Water Aquifer affected
Facility Status: 0

HIST UST:
Region: STATE
Facility ID: 00000064692
Facility Type: Gas Station
Other Type: VEHICLE REPAIR SHOPS
Total Tanks: 0004
Contact Name: ARDELL ROUSE

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

Telephone: 7147876322
Owner Name: COUNTY OF RIVERSIDE, AUTOMOTIV
Owner Address: 4293 ORANGE ST.
Owner City,St,Zip: RIVERSIDE, CA 92501

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00000300
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Visual

O130 **GOODRICH SILVERTOWN STORES** **EDR US Hist Auto Stat** **1009021437**
ENE **4180 MAIN** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.191 mi.
1007 ft. **Site 1 of 2 in cluster O**

Relative:
Higher

Actual:
847 ft.

EDR Historical Auto Stations:
Name: GOODRICH SILVERTOWN STORES
Year: 1936
Type: GAS AND OIL SERVICE STATIONS

Name: GOODRICH SILVERTOWN STORES
Year: 1939
Type: GAS AND OIL SERVICE STATIONS

Name: BRIGGS & ELLIOTT
Year: 1945

GOODRICH SILVERTOWN STORES (Continued) **1009021437**

Type: AUTOMOBILE REPAIRING

O131
ENE
1/8-1/4
0.192 mi.
1015 ft.

CLUB CLEANERS
4180 MAIN ST
RIVERSIDE, CA

EDR US Hist Cleaners **1009145066**
N/A

Site 2 of 2 in cluster O

Relative:
Higher

Actual:
847 ft.

EDR Historical Cleaners:
Name: CLUB CLEANERS
Year: 1945
Type: CLOTHES PRESSERS AND CLEANERS

P132
NE
1/8-1/4
0.192 mi.
1015 ft.

ROME'S TIRE SERVICE
4150 MARKET ST
RIVERSIDE, CA 92506

HIST CORTESE **1000221734**
LUST **N/A**

Site 1 of 13 in cluster P

Relative:
Higher

Actual:
844 ft.

CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 083301058T

LUST:
Region: STATE
Global Id: T0606500106
Latitude: 33.979113
Longitude: -117.3779599
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 04/01/1997
Lead Agency: RIVERSIDE COUNTY LOP
Case Worker: UNK
Local Agency: RIVERSIDE COUNTY LOP
RB Case Number: 083301058T
LOC Case Number: 88477
File Location: Local Agency Warehouse
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline, Waste Oil / Motor / Hydraulic / Lubricating
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0606500106
Contact Type: Local Agency Caseworker
Contact Name: UNK
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email: Not reported
Phone Number: Not reported

Global Id: T0606500106

ROME'S TIRE SERVICE (Continued) **1000221734**

Contact Type: Regional Board Caseworker
Contact Name: NANCY OLSON-MARTIN
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: nolson-martin@waterboards.ca.gov
Phone Number: Not reported

Regulatory Activities:

Global Id: T0606500106
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0606500106
Action Type: ENFORCEMENT
Date: 03/31/1997
Action: File review - #RCDEH Upload Site File 9/7/2010

Global Id: T0606500106
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500106
Action Type: ENFORCEMENT
Date: 04/01/1997
Action: Closure/No Further Action Letter - #RCDEH0401

Global Id: T0606500106
Action Type: ENFORCEMENT
Date: 03/12/1997
Action: LOP Case Closure Summary to RB

Global Id: T0606500106
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500106
Action Type: REMEDIATION
Date: 01/01/1950
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606500106
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

LUST REG 8:

Region: 8
County: Riverside
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083301058T

ROME'S TIRE SERVICE (Continued) **1000221734**

Local Case Num:	88477
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site
Cross Street:	15TH
Enf Type:	Not reported
Funding:	State Funds
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0606500106
How Stopped Date:	6/1/1988
Enter Date:	10/27/1988
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	6/13/1988
Enforcement Date:	Not reported
Close Date:	4/1/1997
Workplan:	10/5/1989
Pollution Char:	8/1/1995
Remed Plan:	3/20/1996
Remed Action:	1/31/1989
Monitoring:	4/4/1989
Enter Date:	10/27/1988
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9789521
Longitude:	-117.3776893
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	NOM
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	PASSIVE SOIL VENT SYSTEM

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	88477
Employee:	Boltinghous-LOP

ROME'S TIRE SERVICE (Continued) **1000221734**

Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed

P133
NE
1/8-1/4
0.192 mi.
1015 ft.

RIME'S TIRE SERVICE, INC. **Notify 65** **S100178784**
4150 MARKET STREET **N/A**
RIVERSIDE, CA 90040

Site 2 of 13 in cluster P

Relative:
Higher

Actual:
844 ft.

Notify 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Incident Description: 90040

P134
NE
1/8-1/4
0.192 mi.
1015 ft.

ROME'S TIRE AND AUTO SUPPLY **HIST UST** **U001576469**
4150 MARKET ST **N/A**
RIVERSIDE, CA 92506

Site 3 of 13 in cluster P

Relative:
Higher

Actual:
844 ft.

HIST UST:
Region: STATE
Facility ID: 00000063726
Facility Type: Other
Other Type: NEW AND USED TIRE SE
Total Tanks: 0002
Contact Name: RICHARD P. ROME
Telephone: 7146843281
Owner Name: MILLER, MYRL R., MILLER, JAMES
Owner Address: 5924 MAGNOLIA AVENUE
Owner City,St,Zip: RIVERSIDE, CA 92506

Tank Num: 001
Container Num: #2
Year Installed: Not reported
Tank Capacity: 00000550
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: None

Tank Num: 002
Container Num: #1
Year Installed: Not reported
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

P135 NE 1/8-1/4 0.192 mi. 1015 ft. | **BROWN L R** | **EDR US Hist Auto Stat** | **1009023456**
4150 MARKET DR | **N/A**
RIVERSIDE, CA

Site 4 of 13 in cluster P

Relative: Higher

Actual: 844 ft.

EDR Historical Auto Stations:

Name:	BROWN L R
Year:	1951
Type:	AUTOMOBILE REPAIRING

---

136 ESE 1/8-1/4 0.196 mi. 1037 ft. | **QUALITY PRINTING** | **WIP** | **S102819673**
200 S RAYMOND AVE | **N/A**
ALHAMBRA, CA 91801

Relative: Higher

Actual: 865 ft.

WIP:

Region:	4
File Number:	115.0196
File Status:	**Backlog**
Staff:	CCHARMLE
Facility Suite:	B

M137 NNW 1/8-1/4 0.203 mi. 1074 ft. | **RIVERSIDE MONUMENTAL CO.** | **HIST UST** | **U001576288**
4291 CEDAR ST | **N/A**
RIVERSIDE, CA 92501

Site 3 of 4 in cluster M

Relative: Higher

Actual: 833 ft.

HIST UST:

Region:	STATE
Facility ID:	00000051747
Facility Type:	Other
Other Type:	MONUMENT DEALER
Total Tanks:	0001
Contact Name:	DOROTHY A. HAGEN
Telephone:	7146832864
Owner Name:	RIVERSIDE MONUMENTAL CO.
Owner Address:	4291 CEDAR STREET
Owner City,St,Zip:	RIVERSIDE, CA 92501
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000500
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	None

M138 NNW 1/8-1/4 0.203 mi. 1074 ft. | **RIVERSIDE MONUMENTAL COMPANY**
4291 CEDAR ST
RIVERSIDE, CA 92501
Site 4 of 4 in cluster M | **HIST UST** | **U001576289**
N/A

Relative: Higher

Actual: 833 ft.

HIST UST:

Region:	STATE
Facility ID:	00000064677
Facility Type:	Other
Other Type:	MONUMENT DEALER
Total Tanks:	0001
Contact Name:	DOROTHY A. HAGEN
Telephone:	7146832864
Owner Name:	RIVERSIDE MONUMENTAL COMPANY
Owner Address:	4291 CEDAR STREET
Owner City,St,Zip:	RIVERSIDE, CA 92501
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000500
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

P139 NE 1/8-1/4 0.216 mi. 1139 ft. | **4135 MARKET**
4135 MARKET
RIVERSIDE, CA 92501
Site 5 of 13 in cluster P | **US BROWNFIELDS FINDS** | **1010698429**
N/A

Relative: Higher

Actual: 843 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4135 MARKET
Property #:	215251004
Parcel size:	0.49
Property Description:	Commercial
Latitude:	33.97928
Longitude:	-117.378054
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64981
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported

4135 MARKET (Continued) **1010698429**

Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	George R Freeman & William G Trust Was
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported

4135 MARKET (Continued) **1010698429**

Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717056

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

P140 **PETERSON & MAINE** **EDR US Hist Auto Stat** **1009023449**
NE **4135 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.216 mi.
1139 ft. **Site 6 of 13 in cluster P**

Relative:
Higher

Actual:
843 ft.

EDR Historical Auto Stations:

Name: PETERSON & MAINE
Year: 1939
Type: SERVICE STATIONS

Name: PETERSON & MAINE
Year: 1939
Type: GAS AND OIL SERVICE STATIONS

Name: MAINE C E SERVICE
Year: 1945
Type: SERVICE STATIONS

P141 **MAINE C E SERVICE** **EDR US Hist Cleaners** **1009145530**
NE **4135 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.216 mi.
1139 ft. **Site 7 of 13 in cluster P**

Relative:
Higher

Actual:
843 ft.

EDR Historical Cleaners:

Name: MAINE C E SERVICE
Year: 1945
Type: FAMILY LAUNDRY WORK

P142
NE
1/8-1/4
0.216 mi.
1139 ft.

PEA
4135 MARKET
RIVERSIDE, CA

EDR US Hist Auto Stat **1009019712**
N/A

Site 8 of 13 in cluster P

Relative:
Higher

Actual:
843 ft.

EDR Historical Auto Stations:

Name:	PEA
Year:	1936
Type:	GAS AND OIL SERVICE STATIONS

P143
NE
1/8-1/4
0.216 mi.
1139 ft.

WINSTON TIRE
4135 MARKET ST
RIVERSIDE, CA 92501

RCRA-SQG **1004676069**
HAZNET **CAR000080499**

Site 9 of 13 in cluster P

Relative:
Higher

Actual:
843 ft.

RCRA-SQG:

Date form received by agency:	08/11/2000
Facility name:	WINSTON TIRE
Facility address:	4135 MARKET ST RIVERSIDE, CA 92501
EPA ID:	CAR000080499
Contact:	BRETT PAPEL
Contact address:	4135 MARKET ST RIVERSIDE, CA 92501
Contact country:	US
Contact telephone:	(909) 686-1530
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	WINSTON TIRES
Owner/operator address:	4135 MARKET ST RIVERSIDE, CA 92501
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 686-1530
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

WINSTON TIRE (Continued) **1004676069**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Violation Status: No violations found

HAZNET:
Year: 2003
Gepaid: CAR000080499
Contact: LUPE ROSALES-DIRECTOR
Telephone: 8189721200
Mailing Name: Not reported
Mailing Address: 900 W ALAMEDA AVE
Mailing City,St,Zip: BURBANK, CA 915060000
Gen County: Not reported
TSD EPA ID: CAT000613927
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.03
Facility County: Riverside

Year: 2002
Gepaid: CAR000080499
Contact: LUPE ROSALES-DIRECTOR
Telephone: 8189721200
Mailing Name: Not reported
Mailing Address: 900 W ALAMEDA AVE
Mailing City,St,Zip: BURBANK, CA 915060000
Gen County: Not reported
TSD EPA ID: CAT000613927
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.14
Facility County: Riverside

Year: 2001
Gepaid: CAR000080499
Contact: LUPE ROSALES-DIRECTOR
Telephone: 8189721200
Mailing Name: Not reported
Mailing Address: 900 W ALAMEDA AVE
Mailing City,St,Zip: BURBANK, CA 915060000
Gen County: Not reported
TSD EPA ID: CAT000613927
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent

WINSTON TIRE (Continued) **1004676069**

Disposal Method: Transfer Station
Tons: 0.46
Facility County: Riverside

Year: 2000
Gepaid: CAR000080499
Contact: LUPE ROSALES-DIRECTOR
Telephone: 8189721200
Mailing Name: Not reported
Mailing Address: 900 W ALAMEDA AVE
Mailing City,St,Zip: BURBANK, CA 915060000
Gen County: Not reported
TSD EPA ID: CAT000613927
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.16
Facility County: Riverside

---

144 North 1/8-1/4 0.216 mi. 1143 ft.

LEWIS P M LABORATORIES#
4121 BROCKTON AVE
RIVERSIDE, CA 92501

RCRA-SQG FINDS **1000262342 CAD010695492**

Relative: Higher

Actual: 834 ft.

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: LEWIS P M LABORATORIES#
Facility address: 4121 BROCKTON AVE
RIVERSIDE, CA 92501
EPA ID: CAD010695492
Contact: ENVIRONMENTAL MANAGER
Contact address: 4121 BROCKTON AVE
RIVERSIDE, CA 92501
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED

LEWIS P M LABORATORIES# (Continued) **1000262342**

Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 08/18/1980
Facility name: LEWIS P M LABORATORIES#
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002638094

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

P145 **SAPPINGTON VAUGHN** **EDR US Hist Auto Stat** **1009021777**
NE **4110 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.221 mi.
1167 ft. **Site 10 of 13 in cluster P**

Relative:
Higher

Actual:
845 ft.

EDR Historical Auto Stations:
Name: SAPPINGTON VAUGHN
Year: 1951
Type: GASOLINE STATIONS

Q146 **3890 11TH** **US BROWNFIELDS** **1010698675**
NE **3890 11TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.228 mi.
1205 ft. **Site 1 of 7 in cluster Q**

Relative:
Higher

Actual:
839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3890 11TH
Property #:	215251012
Parcel size:	0.82
Property Description:	Commercial
Latitude:	33.97991
Longitude:	-117.378717
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64986
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Riverside Legal & Prof Management
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3890 11TH (Continued) **1010698675**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717289

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Q147 NE 1/8-1/4 0.230 mi. 1216 ft. | **3891 11TH**
3891 11TH
RIVERSIDE, CA 92501

Site 2 of 7 in cluster Q

US BROWNFIELDS FINDS | **1010698423**
N/A

Relative: Higher

Actual: 840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3891 11TH
Property #:	215091010
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.980145
Longitude:	-117.378559
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64974
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Miller & Harding Rentals
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3891 11TH (Continued) **1010698423**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716994

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Q148 **3875 11TH** **US BROWNFIELDS** **1010698424**
NE **3875 11TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.230 mi.
1217 ft. **Site 3 of 7 in cluster Q**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3875 11TH
Property #:	215091011
Parcel size:	0.14
Property Description:	Commercial
Latitude:	33.980076
Longitude:	-117.378409
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64975
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Jesse L & Barbara Ann Valenzuela
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3875 11TH (Continued) **1010698424**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717001

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Q149
NE
1/8-1/4
0.230 mi.
1217 ft.

DOLK S A
3875 11TH ST
RIVERSIDE, CA

Site 4 of 7 in cluster Q

EDR US Hist Auto Stat **1009019801**
N/A

Relative:
Higher

Actual:
840 ft.

EDR Historical Auto Stations:

Name:	DOLK S A
Year:	1936
Type:	AUTOMOBILE REPAIRS

Q150
NE
1/8-1/4
0.231 mi.
1218 ft.

3855 11TH
3855 11TH
RIVERSIDE, CA 92501

Site 5 of 7 in cluster Q

US BROWNFIELDS FINDS **1010698425**
N/A

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3855 11TH
Property #:	215091012
Parcel size:	Not reported
Property Description:	Residential
Latitude:	33.979989
Longitude:	-117.378222
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64976
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Justin D Tracy
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported

3855 11TH (Continued) **1010698425**

IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717010

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES)
is an federal online database for Brownfields Grantees to

3855 11TH (Continued) **1010698425**

electronically submit data directly to EPA.

P151 **RUBIDOUX SERVICE STATION** **EDR US Hist Cleaners** **1009146946**
NE **4096 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.234 mi.
1237 ft. **Site 11 of 13 in cluster P**

Relative:
Higher

Actual:
845 ft.

EDR Historical Cleaners:

Name:	RUBIDOUX SERVICE STATION
Year:	1945
Type:	FAMILY LAUNDRY WORK

P152 **PATTON C G** **EDR US Hist Auto Stat** **1009019717**
NE **4096 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.234 mi.
1237 ft. **Site 12 of 13 in cluster P**

Relative:
Higher

Actual:
845 ft.

EDR Historical Auto Stations:

Name:	PATTON C G
Year:	1930
Type:	GASOLINE AND OIL SERVICE STATIONS
Name:	RUBIDOUX SERVICE STATION
Year:	1936
Type:	GAS AND OIL SERVICE STATIONS
Name:	HALL MOTORS
Year:	1951
Type:	GASOLINE STATIONS

P153 **4093 MARKET** **US BROWNFIELDS FINDS** **1010698427**
NE **4093 MARKET** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.237 mi.
1251 ft. **Site 13 of 13 in cluster P**

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4093 MARKET
Property #:	215091014
Parcel size:	0.49
Property Description:	Commercial
Latitude:	33.979793
Longitude:	-117.377713
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64978
Start date:	Not reported
Completed date:	Not reported

4093 MARKET (Continued) **1010698427**

Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Justin D Tracy
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported

4093 MARKET (Continued) **1010698427**

Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717038

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

R154 **HUGHES D W** **EDR US Hist Auto Stat** **1009019830**
ENE **3739 11TH ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.238 mi.
1259 ft. **Site 1 of 7 in cluster R**

Relative:
Higher

Actual:
848 ft.

EDR Historical Auto Stations:

Name:	HUGHES D W
Year:	1939
Type:	AUTOMOBILE REPAIRING

S155 **PINE CENTER CLEANERS** **RCRA-SQG** **1000195691**
West **4644 PINE ST** **FINDS** **CAD982320343**
1/8-1/4 **RIVERSIDE, CA 92501** **SLIC**
0.241 mi. **DRYCLEANERS**
1274 ft. **Site 1 of 2 in cluster S** **HAZNET**
EMI

Relative:
Lower

Actual:
779 ft.

RCRA-SQG:

Date form received by agency:	03/16/1988
Facility name:	PINE CENTER CLEANERS
Facility address:	4644 PINE ST RIVERSIDE, CA 92501
EPA ID:	CAD982320343
Contact:	ENVIRONMENTAL MANAGER
Contact address:	4644 PINE ST

PINE CENTER CLEANERS (Continued) **1000195691**

RIVERSIDE, CA 92501
Contact country: US
Contact telephone: (714) 683-9496
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NATHANIEL N CHO
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002793317

Environmental Interest/Information System

PINE CENTER CLEANERS (Continued) **1000195691**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SLIC:

Region:	STATE
Facility Status:	**Open - Site Assessment**
Status Date:	10/18/2004
Global Id:	SLT8R0223907
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	Not reported
Latitude:	33.9765435690856
Longitude:	-117.38911986351
Case Type:	Cleanup Program Site
Case Worker:	PAH
Local Agency:	Not reported
RB Case Number:	SLT8R022
File Location:	Regional Board
Potential Media Affected:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

SLIC REG 8:

Type:	Soil and Groundwater
Facility Status:	39512
Region:	8
Staff:	EGK
Substance:	EGK
Lead Agency:	EGK
Location Code:	EGK
Thomas Bros Code:	EGK

DRYCLEANERS:

EPA Id:	CAD982320343
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	06/17/1988
Facility Active:	No
Inactive Date:	06/30/1998
Facility Addr2:	Not reported
Owner Name:	YOUN CHUL CHUN
Owner Address:	4644 PINE ST
Owner Address 2:	Not reported
Owner Telephone:	9098247067
Contact Name:	YONG CHUL CHUN
Contact Address:	INACT PER 98VQ FINAL NOTICE
Contact Address 2:	- BATCH 4/27
Contact Telephone:	9098247067

PINE CENTER CLEANERS (Continued) **1000195691**

HAZNET:

Year:	2005
Gepaid:	CAD982320343
Contact:	YONG CHUL CHUN
Telephone:	9098247067
Mailing Name:	Not reported
Mailing Address:	4644 PINE ST
Mailing City,St,Zip:	RIVERSIDE, CA 925014007
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Riverside

Year:	2005
Gepaid:	CAD982320343
Contact:	YONG CHUL CHUN
Telephone:	9098247067
Mailing Name:	Not reported
Mailing Address:	4644 PINE ST
Mailing City,St,Zip:	RIVERSIDE, CA 925014007
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	Invalid Code
Tons:	0.12
Facility County:	Riverside

Year:	2005
Gepaid:	CAD982320343
Contact:	YONG CHUL CHUN
Telephone:	9098247067
Mailing Name:	Not reported
Mailing Address:	4644 PINE ST
Mailing City,St,Zip:	RIVERSIDE, CA 925014007
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Riverside

Year:	1998
Gepaid:	CAD982320343
Contact:	YOUN CHUL CHUN
Telephone:	9098247067
Mailing Name:	Not reported
Mailing Address:	4644 PINE ST
Mailing City,St,Zip:	RIVERSIDE, CA 925014007
Gen County:	Not reported
TSD EPA ID:	CAD981375983

PINE CENTER CLEANERS (Continued) **1000195691**

TSD County:	Not reported
Waste Category:	Solids or sludges with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Recycler
Tons:	.0375
Facility County:	Riverside

Year:	1996
Gepaid:	CAD982320343
Contact:	YOUN CHUL CHUN
Telephone:	9098247067
Mailing Name:	Not reported
Mailing Address:	4644 PINE ST
Mailing City,St,Zip:	RIVERSIDE, CA 925014007
Gen County:	Not reported
TSD EPA ID:	CAD981397417
TSD County:	Not reported
Waste Category:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	Recycler
Tons:	.0583
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	42266
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

S156 **EDR US Hist Cleaners** **1015064424**
West **4644 PINE ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.241 mi.
1274 ft. **Site 2 of 2 in cluster S**

Relative:
Lower

Actual:
779 ft.

EDR Historical Cleaners:

Name:	PINE CENTER CLEANERS
Year:	1999
Address:	4644 PINE ST

Name:	PINE CENTER CLEANERS
Year:	2000
Address:	4644 PINE ST

(Continued) **1015064424**

Name: PINE CTR CLEANERS
Year: 2001
Address: 4644 PINE ST

Name: PINE CTR CLEANERS
Year: 2002
Address: 4644 PINE ST

Name: PINE CTR CLEANERS
Year: 2003
Address: 4644 PINE ST

Name: PINE CTR CLEANERS
Year: 2004
Address: 4644 PINE ST

Name: PINE CENTER CLEANERS
Year: 2005
Address: 4644 PINE ST

Name: PINE CENTER CLEANERS
Year: 2006
Address: 4644 PINE ST

Name: PINE CENTER CLEANERS
Year: 2007
Address: 4644 PINE ST

Name: PINE CENTER CLEANERS
Year: 2008
Address: 4644 PINE ST

R157 **COUNTY OF RIVERSIDE HALL OF JUSTICE** **UST** **U003713558**
ENE **4100 MAIN ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.245 mi.
1295 ft. **Site 2 of 7 in cluster R**

Relative:
Higher

Actual:
849 ft.

UST:
Facility ID: 262
Latitude: 33.9789
Longitude: -117.37645

R158 **KNIGHT J F** **EDR US Hist Auto Stat** **1009021755**
ENE **4099 MAIN ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.249 mi.
1313 ft. **Site 3 of 7 in cluster R**

Relative:
Higher

Actual:
849 ft.

EDR Historical Auto Stations:
Name: KNIGHT J F
Year: 1930
Type: AUTO REPAIRING

Name: WEBB ELVIN E
Year: 1936

KNIGHT J F (Continued) **1009021755**

Type: AUTOMOBILE REPAIRS

R159 **4075 MAIN** **US BROWNFIELDS** **1010695675**
ENE **4075 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.257 mi.
1356 ft. **Site 4 of 7 in cluster R**

Relative:
Higher

Actual:
849 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4075 MAIN
Property #:	215092012
Parcel size:	0.47
Property Description:	Commercial
Latitude:	33.979347
Longitude:	-117.376355
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65015
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	County of Riverside
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported

4075 MAIN (Continued) **1010695675**

Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717582

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Q160
NE
1/4-1/2
0.259 mi.
1366 ft.

4060 ALMOND
4060 ALMOND
RIVERSIDE, CA 92501

Site 6 of 7 in cluster Q

US BROWNFIELDS FINDS

1010698422
N/A

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4060 ALMOND
Property #:	215091009
Parcel size:	0.11
Property Description:	Commercial
Latitude:	33.980452
Longitude:	-117.378458
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64973
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Justin D Tracy
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4060 ALMOND (Continued) **1010698422**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716985

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

R161 **4049 MAIN** **US BROWNFIELDS** **1010695674**
ENE **4049 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.266 mi.
1402 ft. **Site 5 of 7 in cluster R**

Relative:
Higher

Actual:
849 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4049 MAIN
Property #:	215092011
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.979542
Longitude:	-117.376226
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65014
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ernest A Zinke & Alma Trust Fershko, H Grace
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4049 MAIN (Continued) **1010695674**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717573

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

R162 ENE 1/4-1/2 0.277 mi. 1463 ft. | **4015 MAIN**
4015 MAIN
RIVERSIDE, CA 92501

Site 6 of 7 in cluster R

US BROWNFIELDS FINDS | **1010695672**
N/A

Relative: Higher

Actual: 849 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4015 MAIN
Property #:	215092009
Parcel size:	0.22
Property Description:	Commercial
Latitude:	33.979798
Longitude:	-117.376058
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65012
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ernest A Zinke & Alma Trust Fershko, H Grace
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4015 MAIN (Continued) **1010695672**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717555

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T163 NE 1/4-1/2 0.279 mi. 1471 ft. | **4035 MARKET**
4035 MARKET
RIVERSIDE, CA 92501

US BROWNFIELDS FINDS | **1010698421 N/A**

Site 1 of 6 in cluster T

Relative: Higher

Actual: 844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4035 MARKET
Property #:	215091008
Parcel size:	0.05
Property Description:	Commercial
Latitude:	33.980234
Longitude:	-117.377421
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64972
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Suzanne A Wilson
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4035 MARKET (Continued) **1010698421**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716976

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Q164 NE 1/4-1/2 0.279 mi. 1475 ft. | **4040 ALMOND**
4040 ALMOND
RIVERSIDE, CA 92501

Site 7 of 7 in cluster Q

US BROWNFIELDS FINDS | **1010698416**
N/A

Relative: Higher

Actual: 841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4040 ALMOND
Property #:	215091002
Parcel size:	0.08
Property Description:	Commercial
Latitude:	33.980596
Longitude:	-117.378363
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64967
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Gary Kaye & Diana Renteria
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4040 ALMOND (Continued) **1010698416**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716921

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

165 NW 1/4-1/2 0.281 mi. 1486 ft. | **EVERGREEN CEMETARY DISPOSAL SI**
4414 14TH STREET
RIVERSIDE, CA 92501

WMUDS/SWAT **S101614010**
EMI **N/A**

Relative: Lower

Actual: 821 ft.

WMUDS/SWAT:

Edit Date:	Not reported
Complexity:	Not reported
Primary Waste:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Base Meridian:	SB
NPID:	Not reported
Tonnage:	0
Regional Board ID:	Not reported
Municipal Solid Waste:	False
Superorder:	False
Open To Public:	False
Waste List:	False
Agency Type:	Not reported
Agency Name:	EVERGREEN CEMETARY
Agency Department:	Not reported
Agency Address:	4414 14TH STREET
Agency City,St,Zip:	RIVERSIDE 92501
Agency Contact:	Not reported
Agency Telephone:	Not reported
Land Owner Name:	KENNETH A THOMAS (TREASUER)
Land Owner Address:	4414 14TH STREET
Land Owner City,St,Zip:	RIVERSIDE, CA 92501
Land Owner Contact:	Not reported
Land Owner Phone:	Not reported
Region:	8
Facility Type:	Not reported
Facility Description:	Not reported
Facility Telephone:	Not reported
SWAT Facility Name:	EVERGREEN CEMETARY DISPOSAL SITE
Primary SIC:	Not reported
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	Not reported
Waste Discharge System:	False
Solid Waste Assessment Test Program:	True
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	EVERGREEN CEMETARY
Threat to Water Quality:	Not reported
Sub Chapter 15:	False
Regional Board Project Officer:	MA
Number of WMUDS at Facility:	1
Section Range:	02s05w25
RCRA Facility:	Not reported
Waste Discharge Requirements:	Not reported
Self-Monitoring Rept. Frequency:	Not reported
Waste Discharge System ID:	8 330010NUR
Solid Waste Information ID:	33-AA-0033

EVERGREEN CEMETARY DISPOSAL SI (Continued) **S101614010**

EMI:

Year:	1987
County Code:	33
Air Basin:	SC
Facility ID:	21307
Air District Name:	SC
SIC Code:	7261
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	21307
Air District Name:	SC
SIC Code:	0
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

R166 **4001 MAIN** **US BROWNFIELDS** **1010695671**
ENE **4001 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.282 mi.
1487 ft. **Site 7 of 7 in cluster R**

Relative:
Higher

Actual:
849 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4001 MAIN
Property #:	215092008
Parcel size:	0.15
Property Description:	Commercial
Latitude:	33.979883
Longitude:	-117.375944
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65011
Start date:	Not reported
Completed date:	Not reported

4001 MAIN (Continued) **1010695671**

Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	County of Riverside
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported

4001 MAIN (Continued) **1010695671**

Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717546

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T167 **4019 MARKET** **US BROWNFIELDS** **1010698420**
NE **4019 MARKET** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.290 mi.
1531 ft. **Site 2 of 6 in cluster T**

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4019 MARKET
Property #:	215091007
Parcel size:	0.15
Property Description:	Commercial
Latitude:	33.980355
Longitude:	-117.37734
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64971
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement

4019 MARKET (Continued) **1010698420**

Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Suzanne A Wilson
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported

4019 MARKET (Continued) **1010698420**

VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716967

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

168
ENE
1/4-1/2
0.292 mi.
1541 ft.

Relative:
Higher

Actual:
848 ft.

GRIN CHEMICAL COMPANY **ENVIROSTOR** **S100201721**
3972 MAIN STREET **N/A**
RIVERSIDE, CA 92501

ENVIROSTOR:

Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Not reported
Division Branch:	Cleanup Cypress
Facility ID:	33280007
Site Code:	Not reported
Assembly:	61
Senate:	31
Special Program:	* Site Char & Assess Grant (CERCLA 104)
Status:	No Further Action
Status Date:	04/01/1985
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.98194
Longitude:	-117.3744
APN:	NONE SPECIFIED
Past Use:	NONE
Potential COC:	NONE SPECIFIED,31000
Confirmed COC:	31000-NO

GRIN CHEMICAL COMPANY (Continued) **S100201721**

Potential Description: NMA
Alias Name: ANTIMITE ASSOCIATES
Alias Type: Alternate Name
Alias Name: ATLASTA TRANSFORMER CO
Alias Type: Alternate Name
Alias Name: BADER TERMINEX COMPANY
Alias Type: Alternate Name
Alias Name: BEST MAINTENANCE SUPPLY CO
Alias Type: Alternate Name
Alias Name: BREWER & WILSON TERMITE CONTROL
Alias Type: Alternate Name
Alias Name: C B BELDEN TERMITE CONTROL
Alias Type: Alternate Name
Alias Name: RIVERSIDE CITY HALL
Alias Type: Alternate Name
Alias Name: CAD980884951
Alias Type: EPA Identification Number
Alias Name: 33280007
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 04/01/1985
Comments: T/C W/ F.NALL, CITY SENIOR PLANNER - GRIN HAD AN OFFICE IN 3-STORY BLDG.BEFOR CITY HALL CONSTRUCTED. SUBMIT TO EPA PRELIM ASSESS DONE CERCLA 104

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 12/16/1982
Comments: FACILITY IDENTIFIED ID FROM OLD PHONE BOOK SEARCH 1950,1955

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

U169 **3872 10TH** **US BROWNFIELDS** **1010698417**
NE **3872 10TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.303 mi.
1600 ft. **Site 1 of 2 in cluster U**

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:
Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 3872 10TH
Property #: 215091003
Parcel size: 0.24
Property Description: Commercial

3872 10TH (Continued) **1010698417**

Latitude:	33.980774
Longitude:	-117.377936
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64968
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Tony Jimenez
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported

3872 10TH (Continued) **1010698417**

Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716930

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

U170 **3890 10TH** **US BROWNFIELDS** **1010698415**
NE **3890 10TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.303 mi.
1601 ft. **Site 2 of 2 in cluster U**

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3890 10TH
Property #:	215091001
Parcel size:	0.15
Property Description:	Commercial
Latitude:	33.98085
Longitude:	-117.378109
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported

3890 10TH (Continued) **1010698415**

Datum:	Not reported
ACRES property ID:	64966
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Gregory G & Ericka M Rizio
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N

3890 10TH (Continued) **1010698415**

PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716912

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T171 **3796 10TH** **US BROWNFIELDS** **1010695664**
NE **3796 10TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.305 mi.
1608 ft. **Site 3 of 6 in cluster T**

Relative:
Higher

Actual:
845 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3796 10TH
Property #:	215092001
Parcel size:	0.07
Property Description:	Commercial
Latitude:	33.980353
Longitude:	-117.376953
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65005
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported

3796 10TH (Continued) **1010695664**

Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Sang Y & Kyung Sook Kim
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported

3796 10TH (Continued) **1010695664**

Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717485

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T172 **3774 10TH** **US BROWNFIELDS** **1010695666**
NE **3774 10TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.306 mi.
1617 ft. **Site 4 of 6 in cluster T**

Relative:
Higher

Actual:
846 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3774 10TH
Property #:	215092002
Parcel size:	0.09
Property Description:	Commercial
Latitude:	33.980236
Longitude:	-117.376741
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65006
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported

3774 10TH (Continued) **1010695666**

Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Sang Y & Kyung Sook Kim
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N

3774 10TH (Continued) **1010695666**

VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717494

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T173 **3768 10TH** **US BROWNFIELDS** **1010695667**
NE **3768 10TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.307 mi.
1621 ft. **Site 5 of 6 in cluster T**

Relative:
Higher

Actual:
847 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3768 10TH
Property #:	215092003
Parcel size:	0.14
Property Description:	Commercial
Latitude:	33.980208
Longitude:	-117.37668
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65007
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported

3768 10TH (Continued) **1010695667**

Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Tony Jimenez
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported

3768 10TH (Continued) **1010695667**

Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717500

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T174 **3760 10TH** **US BROWNFIELDS** **1010695668**
NE **3760 10TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.308 mi.
1625 ft. **Site 6 of 6 in cluster T**

Relative:
Higher

Actual:
847 ft.

US BROWNFIELDS:
Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 3760 10TH
Property #: 215092004
Parcel size: 0.14
Property Description: Commercial
Latitude: 33.98017
Longitude: -117.3766
HCM label: Not reported
Map scale: Not reported
Point of reference: Not reported
Datum: Not reported
ACRES property ID: 65008
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 400
Assessment funding source: US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: Not reported
Cleanup funding entity: Not reported
Grant type: N/A
Accomplishment type: Phase I Environmental Assessment
Accomplishment count: 1
Cooperative agreement #: 96986301
Ownership entity: Not reported

3760 10TH (Continued) **1010695668**

Current owner:	Kay B & Evelyn L Tillman
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported

3760 10TH (Continued) **1010695668**

Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717519

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

V175 **LUST** **S100217488**
ENE **4080 LEMON** **CHMIRS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.345 mi.
1819 ft. **Site 1 of 2 in cluster V**

Relative:
Higher

Actual:
853 ft.

LUST:

Region:	STATE
Global Id:	T0606500500
Latitude:	33.9781529
Longitude:	-117.3739264
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/21/1998
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	SCB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083303037T
LOC Case Number:	970744
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500500
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	sbolting@rivcocha.org
Phone Number:	9519558982

Global Id:	T0606500500
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

(Continued) **S100217488**

Regulatory Activities:

Global Id:	T0606500500
Action Type:	ENFORCEMENT
Date:	04/21/1998
Action:	Closure/No Further Action Letter - #RCDEH0421
Global Id:	T0606500500
Action Type:	Other
Date:	01/01/1950
Action:	Leak Stopped
Global Id:	T0606500500
Action Type:	ENFORCEMENT
Date:	04/20/1998
Action:	File review - #RCDEH Upload Site File 9/14/2010
Global Id:	T0606500500
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0606500500
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	970744
Employee:	Boltinghous-LOP
Site Closed:	Yes
Case Type:	Soil only
Facility Status:	closed/action completed

CHMIRS:

OES Incident Number:	8907085
OES notification:	Not reported
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	18-JUL-89
Date Completed:	**18-JUL-89**
Property Use:	500
Agency Id Number:	33075
Agency Incident Number:	8909766
Time Notified:	1558
Time Completed:	2104
Surrounding Area:	500
Estimated Temperature:	85
Property Management:	K
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported

(Continued) **S100217488**

More Than Two Substances Involved?:	N
Resp Agncy Personel # Of Decontaminated:	0
Responding Agency Personel # Of Injuries:	0
Responding Agency Personel # Of Fatalities:	0
Others Number Of Decontaminated:	0
Others Number Of Injuries:	0
Others Number Of Fatalities:	0
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	STEVE EARLEY #26000
Report Date:	18-JUL-89
Comments:	Not reported
Facility Telephone:	714 782-5311
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Not reported
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	88-92
Agency:	Not reported
Incident Date:	Not reported
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Not reported
Site Type:	Not reported
E Date:	16-MAY-90
Substance:	Not reported
Quantity Released:	Not reported
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
Description:	Not reported

V176 ENE 1/4-1/2 0.345 mi. 1819 ft.

RSDE COUNTY ADMINISTRATIVE CTR
4080 LEMON ST
RIVERSIDE, CA 92501

Site 2 of 2 in cluster V

HIST CORTESE **S101589950**
LUST **N/A**
CA FID UST
SWEEPS UST
EMI

Relative: Higher

Actual: 853 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083303037T

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083303037T
Local Case Num:	970744
Case Type:	Soil only
Substance:	Diesel
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	10TH
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0606500500
How Stopped Date:	Not reported
Enter Date:	8/29/1997
Review Date:	7/14/1997
Prelim Assess:	Not reported
Discover Date:	7/14/1997
Enforcement Date:	Not reported
Close Date:	4/21/1998
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	8/29/1997
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9778422
Longitude:	-117.3737662
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*

RSDE COUNTY ADMINISTRATIVE CTR (Continued) **S101589950**

Staff: VJJ
Staff Initials: UNK
Lead Agency: Local Agency
Local Agency: 33000L
Hydr Basin #: UPPER SANTA ANA VALL
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 33001655
Regulated By: UTNKA
Regulated ID: 00032207
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7147872452
Mail To: Not reported
Mailing Address: 4080 LEMON ST
Mailing Address 2: Not reported
Mailing City,St,Zip: RIVERSIDE 92501
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 32207
Number: 4
Board Of Equalization: 44-018155
Referral Date: 04-19-89
Action Date: 04-19-89
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 1
Swrcb Tank Id: 33-000-032207-000001
Actv Date: 07-01-85
Capacity: 500
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 1

EMI:
Year: 1987
County Code: 33
Air Basin: SC
Facility ID: 684
Air District Name: SC
SIC Code: 4463
Air District Name: SOUTH COAST AQMD

RSDE COUNTY ADMINISTRATIVE CTR (Continued) **S101589950**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	6
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	684
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	33
Air Basin:	SC
Facility ID:	684
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	1
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

W177 **MOBIL #18-D3H** **HIST CORTESE** **S101590086**
ESE **3315 14TH ST** **LUST** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501** **CA FID UST**
0.378 mi. **SWEEPS UST**
1996 ft. **Site 1 of 3 in cluster W**

Relative:
Higher

Actual:
863 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083302925T

LUST:

MOBIL #18-D3H (Continued) **S101590086**

Region:	STATE
Global Id:	T0606500480
Latitude:	33.9743132
Longitude:	-117.3739591
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/25/2008
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	SCB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083302925T
LOC Case Number:	961023
File Location:	Local Agency
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500480
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375

Global Id:	T0606500480
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	sbolting@rivcocha.org
Phone Number:	9519558982

Regulatory Activities:

Global Id:	T0606500480
Action Type:	ENFORCEMENT
Date:	01/25/2008
Action:	Closure/No Further Action Letter - #RCDEH012508

Global Id:	T0606500480
Action Type:	Other
Date:	01/01/1950
Action:	Leak Stopped

Global Id:	T0606500480
Action Type:	RESPONSE
Date:	10/15/2007
Action:	Monitoring Report - Quarterly

Global Id:	T0606500480
Action Type:	RESPONSE
Date:	04/20/2007

MOBIL #18-D3H (Continued) **S101590086**

Action: Other Report / Document

Global Id: T0606500480
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500480
Action Type: ENFORCEMENT
Date: 05/21/2007
Action: Technical Correspondence / Assistance / Other - #RCDEH -52107

Global Id: T0606500480
Action Type: ENFORCEMENT
Date: 11/19/2007
Action: File review

Global Id: T0606500480
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500480
Action Type: ENFORCEMENT
Date: 04/05/2007
Action: Staff Letter - #1

Global Id: T0606500480
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0606500480
Action Type: RESPONSE
Date: 05/31/2007
Action: Request for Closure

LUST REG 8:
Region: 8
County: Riverside
Regional Board: Santa Ana Region
Facility Status: Pollution Characterization
Case Number: 083302925T
Local Case Num: 961023
Case Type: Aquifer affected
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Cross Street: MULBERRY
Enf Type: Not reported
Funding: Not reported
How Discovered: OM
How Stopped: Not reported
Leak Cause: UNK
Leak Source: Not reported
Global ID: T0606500480

MOBIL #18-D3H (Continued) **S101590086**

How Stopped Date:	Not reported
Enter Date:	11/7/1996
Review Date:	9/24/1996
Prelim Assess:	Not reported
Discover Date:	9/24/1996
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	7/20/1999
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	11/7/1996
GW Qualifies:	=
Soil Qualifies:	ND
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9743132
Longitude:	-117.3739591
MTBE Date:	2/13/2004
Max MTBE GW:	1100
MTBE Concentration:	1
Max MTBE Soil:	5
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	B
Staff:	RS
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	GROUNDWATER ENCOUNTER AT 92 FT., NO GW SAMPLE COLLECTED.

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	961023
Employee:	Boltinghous-LOP
Site Closed:	Yes
Case Type:	Drinking Water Aquifer affected
Facility Status:	closed/action completed

CA FID UST:

Facility ID:	33003825
Regulated By:	UTNKA
Regulated ID:	00039275
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7146828444
Mail To:	Not reported
Mailing Address:	3225 GALLOWS RD

MOBIL #18-D3H (Continued) **S101590086**

Mailing Address 2: Not reported
Mailing City,St,Zip: RIVERSIDE 92501
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 39275
Number: 1
Board Of Equalization: 44-000400
Referral Date: 11-17-92
Action Date: 11-17-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 18D3HUL-12DW88
Swrcb Tank Id: 33-000-039275-000001
Actv Date: 11-17-92
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 4

Status: Active
Comp Number: 39275
Number: 1
Board Of Equalization: 44-000400
Referral Date: 11-17-92
Action Date: 11-17-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 18D3HRG-10DW88
Swrcb Tank Id: 33-000-039275-000002
Actv Date: 11-17-92
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: LEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 39275
Number: 1
Board Of Equalization: 44-000400
Referral Date: 11-17-92
Action Date: 11-17-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 18D3HUL-10DW88
Swrcb Tank Id: 33-000-039275-000003
Actv Date: 11-17-92
Capacity: 10000

MOBIL #18-D3H (Continued) **S101590086**

Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported
Status:	Active
Comp Number:	39275
Number:	1
Board Of Equalization:	44-000400
Referral Date:	11-17-92
Action Date:	11-17-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	18D3HWO-1000DW
Swrcb Tank Id:	33-000-039275-000004
Actv Date:	11-17-92
Capacity:	1000
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL
Number Of Tanks:	Not reported

W178
ESE
1/4-1/2
0.384 mi.
2026 ft.

CHEVRON #96984 **LUST** **S105035908**
3304 14TH ST **N/A**
RIVERSIDE, CA 92501

Site 2 of 3 in cluster W

Relative:
Higher

Actual:
863 ft.

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Preliminary site assessment underway
Case Number:	083303692T
Local Case Num:	200016217
Case Type:	Aquifer affected
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	91 FWY AND MULBERRY ST
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0606599140
How Stopped Date:	2/22/2000
Enter Date:	5/24/2000
Review Date:	4/11/2000
Prelim Assess:	4/28/2000
Discover Date:	4/11/2000
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported

CHEVRON #96984 (Continued) **S105035908**

Monitoring:	Not reported
Enter Date:	5/24/2000
GW Qualifies:	=
Soil Qualifies:	ND
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.973961
Longitude:	-117.373956
MTBE Date:	9/21/2001
Max MTBE GW:	34000
MTBE Concentration:	0
Max MTBE Soil:	0
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	TME
Staff Initials:	SCB
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	No
Summary:	Site assessment report submitted on November 15, 2000.

W179 **CHEVRON #96984** **LUST** **U001576264**
ESE **3304 14TH ST** **HIST UST** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501** **SWEEPS UST**
0.384 mi.
2026 ft. **Site 3 of 3 in cluster W**

Relative:
Higher

Actual:
863 ft.

LUST:

Region:	STATE
Global Id:	T0606599140
Latitude:	33.973961
Longitude:	-117.373956
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/22/2008
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	SCB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083303692T
LOC Case Number:	200016217
File Location:	Local Agency
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606599140
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE

CHEVRON #96984 (Continued) **U001576264**

Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email: sbolting@rivcocha.org
Phone Number: 9519558982

Global Id: T0606599140
Contact Type: Regional Board Caseworker
Contact Name: TOM E. MBEKE-EKANEM
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: tmbeke-ekanem@waterboards.ca.gov
Phone Number: 9513202007

Regulatory Activities:

Global Id: T0606599140
Action Type: ENFORCEMENT
Date: 03/13/2008
Action: LOP Case Closure Summary to RB

Global Id: T0606599140
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0606599140
Action Type: RESPONSE
Date: 04/27/2007
Action: Request for Closure

Global Id: T0606599140
Action Type: RESPONSE
Date: 05/30/2008
Action: Unknown

Global Id: T0606599140
Action Type: ENFORCEMENT
Date: 03/19/2008
Action: Staff Letter - #RCDEH031908

Global Id: T0606599140
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606599140
Action Type: ENFORCEMENT
Date: 03/27/2007
Action: Technical Correspondence / Assistance / Other - #RCDEH 032807

Global Id: T0606599140
Action Type: ENFORCEMENT
Date: 05/06/2008
Action: Staff Letter - #RCDEH050608

Global Id: T0606599140

CHEVRON #96984 (Continued) **U001576264**

Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0606599140
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0606599140
Action Type:	ENFORCEMENT
Date:	09/19/2008
Action:	Closure/No Further Action Letter - #RCDEH 09-19-08

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	200016217
Employee:	Boltinghous-LOP
Site Closed:	Yes
Case Type:	Drinking Water Aquifer affected
Facility Status:	closed/action completed

HIST UST:

Region:	STATE
Facility ID:	00000057387
Facility Type:	Other
Other Type:	CAR WASH
Total Tanks:	0001
Contact Name:	EARL MILLEKER
Telephone:	7146845560
Owner Name:	CHEVRON U.S.A. INC. OPERATIONS
Owner Address:	P.O. BOX 2833
Owner City,St,Zip:	LA HABRA, CA 90631
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Tank Construction:	Not reported
Leak Detection:	Visual

SWEEPS UST:

Status:	Active
Comp Number:	62943
Number:	1
Board Of Equalization:	44-018446
Referral Date:	02-28-94
Action Date:	04-21-94
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	33-000-062943-000001
Actv Date:	02-28-94

CHEVRON #96984 (Continued) **U001576264**

Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	3

Status:	Active
Comp Number:	62943
Number:	1
Board Of Equalization:	44-018446
Referral Date:	02-28-94
Action Date:	04-21-94
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	33-000-062943-000002
Actv Date:	02-28-94
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	62943
Number:	1
Board Of Equalization:	44-018446
Referral Date:	02-28-94
Action Date:	04-21-94
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	3
Swrcb Tank Id:	33-000-062943-000003
Actv Date:	02-28-94
Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	P
Content:	PRM UNLEADED
Number Of Tanks:	Not reported

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180 **MARKET STREET PROPERTIES** **SLIC** **S111012725**
NE **3801 MARKET STREET** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.459 mi.
2425 ft.

Relative:
Higher

Actual:
847 ft.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	11/03/2011
Global Id:	T10000003053
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	Not reported
Latitude:	33.982438
Longitude:	-117.376206
Case Type:	Cleanup Program Site
Case Worker:	KS
Local Agency:	Not reported

MARKET STREET PROPERTIES (Continued) **S111012725**

RB Case Number: Not reported
File Location: Regional Board
Potential Media Affected: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

181
NE
1/4-1/2
0.476 mi.
2514 ft.

GRIN CHEM CO **CERC-NFRAP** **1003878733**
3792 MAIN ST **CAD980884951**
RIVERSIDE, CA 92522

Relative:
Higher

Actual:
848 ft.

CERC-NFRAP:
Site ID: 0902155
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:
Contact Sequence ID: 13051210.00000
Person ID: 9271184.00000

Contact Sequence ID: 13288609.00000
Person ID: 13003854.00000

Contact Sequence ID: 13294204.00000
Person ID: 13003858.00000

Contact Sequence ID: 13300062.00000
Person ID: 13004003.00000

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: / /
Date Completed: 04/01/85
Priority Level: Not reported

Action: ARCHIVE SITE
Date Started: / /
Date Completed: 10/01/85
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: 04/01/85
Date Completed: 10/01/85
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

182 ESE 1/2-1 0.537 mi. 2834 ft. | **FAIRFIELD CHEMICALS 3075 14TH ST RIVERSIDE, CA 92507** | **ENVIROSTOR** | **S109422426 N/A**

Relative: Higher

Actual: 874 ft.

ENVIROSTOR:

Site Type:	Evaluation
Site Type Detailed:	Evaluation
Acres:	7.45
NPL:	NO
Regulatory Agencies:	SMBRP, US EPA
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	* Greg Holmes
Division Branch:	Cleanup Cypress
Facility ID:	60000221
Site Code:	Not reported
Assembly:	61
Senate:	31
Special Program:	EPA - PASI
Status:	Inactive - Needs Evaluation
Status Date:	03/06/2006
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not Applicable
Latitude:	33.96983
Longitude:	-117.3741
APN:	211231023
Past Use:	FUEL - AIRCRAFT STORAGE/ REFUELING
Potential COC:	30017
Confirmed COC:	30017-NO
Potential Description:	NONE SPECIFIED
Alias Name:	211231023
Alias Type:	APN
Alias Name:	CAN000908323
Alias Type:	EPA Identification Number
Alias Name:	60000221
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	06/13/2006
Comments:	EPA concurrence June 13, 2006
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

183 NNE 1/2-1 0.538 mi. 2839 ft. | **STEARNS DOWNTOWN LIQUOR** | **Notify 65** | **S100231512** | **N/A**
4029 7TH
RIVERSIDE, CA 90040

Relative: Higher

Actual: 842 ft.

Notify 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Incident Description:	90040

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184 East 1/2-1 0.638 mi. 3367 ft. | **RIVERSIDE GAS AND ELECTRIC LIGHT CO** | **EDR MGP** | **1008407743** | **N/A**
3084 E. 10TH STREET
RIVERSIDE, CA 92507

Relative: Higher

Actual: 872 ft.

Manufactured Gas Plants:

Alternate Name:EDISON ELECTRIC LIGHT GO-GAS WORKS;SOUTHERN CAL GAS. No additional information available

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185 East 1/2-1 0.712 mi. 3757 ft. | **SO CAL GAS/RIVERSIDE MGP** | **DEED** | **S101481581**
10TH STREET AND HOWARD | **VCP** | **N/A**
RIVERSIDE, CA 92507 | **ENVIROSTOR**

Relative: Higher

Actual: 873 ft.

DEED:

Area:	PROJECT WIDE
Sub Area:	Not reported
Site Type:	VOLUNTARY CLEANUP
Status:	ACTIVE
Deed Date(s):	06/01/2012

VCP:

Facility ID:	33490085
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	1.2
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Tedd Yargeau
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Site Code:	400964
Assembly:	61
Senate:	31
Special Programs Code:	Voluntary Cleanup Program
Status:	Active
Status Date:	10/22/1997
Restricted Use:	YES
Funding:	Responsible Party
Lat/Long:	33.975 / -117.368

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

APN:	211-201-004, 211-201-039
Past Use:	MANUFACTURED GAS PLANT
Potential COC:	30019
Confirmed COC:	30019
Potential Description:	SOIL
Alias Name:	RIVERSIDE MPG SITE
Alias Type:	Alternate Name
Alias Name:	SO CAL GAS - RIVERSIDE
Alias Type:	Alternate Name
Alias Name:	SOUTHERN CALIFORNIA GAS
Alias Type:	Alternate Name
Alias Name:	SOUTHERN CALIFORNIA GAS COMPANY
Alias Type:	Alternate Name
Alias Name:	TOWN GAS SITE - RIVERSIDE
Alias Type:	Alternate Name
Alias Name:	211-201-004
Alias Type:	APN
Alias Name:	211-201-039
Alias Type:	APN
Alias Name:	110033615746
Alias Type:	EPA (FRS #)
Alias Name:	400964
Alias Type:	Project Code (Site Code)
Alias Name:	33490085
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedy Constructed: Operating Properly & Successfully
Completed Date:	03/06/2012
Comments:	Construction Complete
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	04/20/2012
Comments:	Post Closure Soil Gas and Groundwater Sampling completed
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	08/30/2012
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Supplemental Site Investigation Report
Completed Date:	12/09/2005
Comments:	DTSC conditionally approved the SSI/HRA report and recommended to proceed with the submittal of the RAW.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Action Plan
Completed Date:	10/15/2007
Comments:	DTSC approved the RAP and the Negative Declaration for the site. The site's soil is contaminated with elevated levels of polycyclic

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), benzidine, lead and arsenic. The selected remedial alternative is the excavation of all contaminated soil above site target criteria. The excavated soil will be removed and transported off-site for treatment/recycling or disposal. It is expected that approximately 100,000 tons on contaminated soil will be removed from the site. The excavated area will be restored by backfilling with clean imported soil, followed by compacting and grading.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/02/1994
Comments: PEA considered complete. Further investigation/remediation warranted in future on lo-priority basis.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/04/2006
Comments: DTSC completed review and suggested incorporation of acceptable response into subsequent quarterly reports.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/31/2005
Comments: Approved and asked to incoporate comments in the 2nd quarter report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/18/2006
Comments: Approved and recommended to incorporate comments in the 3rd quarter monitoring report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 05/25/2006
Comments: DTSC does not have any comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Report
Completed Date: 06/25/2007
Comments: DTSC approved the FS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/22/2006
Comments: DTSC approved the report with comments. However, recommened to incorporate DTSC's comments in the future reports.

Completed Area Name: PROJECT WIDE

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/11/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/11/2007
Comments: DTSC provided comments regrding the subject document.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 06/30/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 06/30/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Plan
Completed Date: 06/20/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 08/17/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/18/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/09/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 09/24/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 08/06/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 03/06/2012
Comments: Riverside MGP RACR final reviewed and approved

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/06/2009
Comments: DTSC approved the report. However, recommended not to discontinue Title 2 metal analysis. DTSC suggested to reduce the frequency of metal analysis from quarterly to annual basis.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 12/06/2008
Comments: DTSC scheduled a meeting to discuss internally.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application
Completed Date: 01/05/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 01/26/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/30/2010
Comments: RA Fieldwork Implemented

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 11/05/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/23/2011
Comments: Supplemental fieldwork completed in support of Remedial Action

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 07/18/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Neg. Declaration
Completed Date: 10/15/2007
Comments: DTSC approved the Negative Declaration.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/09/2007
Comments: DTSC sent the cost estimate for the upcoming year.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/07/2009
Comments: Mailed the letter to the RP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/09/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 08/15/2008
Comments: DTSC sent a letter requesting voluntary site access for implementing the RAP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Voluntary Cleanup Agreement Completion
Completed Date: 08/20/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Document Type: Correspondence
Completed Date: 10/19/2010
Comments: Draft and send out cost estimate letter for fiscal year 2010-2011

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/22/2010
Comments: FMC Invite letter competed and sent out

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 06/01/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 11/29/2012
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: 5 Year Review Reports
Schedule Due Date: 04/15/2013
Schedule Revised Date: Not reported

ENVIROSTOR:
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 1.2
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Tedd Yargeau
Supervisor: Javier Hinojosa
Division Branch: Cleanup Chatsworth
Facility ID: 33490085
Site Code: 400964
Assembly: 61
Senate: 31
Special Program: Voluntary Cleanup Program
Status: Active
Status Date: 10/22/1997
Restricted Use: YES
Site Mgmt. Req.: NONE SPECIFIED
Funding: Responsible Party
Latitude: 33.975
Longitude: -117.368
APN: 211-201-004, 211-201-039
Past Use: MANUFACTURED GAS PLANT
Potential COC: 30019

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Confirmed COC: 30019
Potential Description: SOIL
Alias Name: RIVERSIDE MPG SITE
Alias Type: Alternate Name
Alias Name: SO CAL GAS - RIVERSIDE
Alias Type: Alternate Name
Alias Name: SOUTHERN CALIFORNIA GAS
Alias Type: Alternate Name
Alias Name: SOUTHERN CALIFORNIA GAS COMPANY
Alias Type: Alternate Name
Alias Name: TOWN GAS SITE - RIVERSIDE
Alias Type: Alternate Name
Alias Name: 211-201-004
Alias Type: APN
Alias Name: 211-201-039
Alias Type: APN
Alias Name: 110033615746
Alias Type: EPA (FRS #)
Alias Name: 400964
Alias Type: Project Code (Site Code)
Alias Name: 33490085
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedy Constructed: Operating Properly & Successfully
Completed Date: 03/06/2012
Comments: Construction Complete

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 04/20/2012
Comments: Post Closure Soil Gas and Groundwater Sampling completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/30/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 12/09/2005
Comments: DTSC conditionally approved the SSI/HRA report and recommended to proceed with the submittal of the RAW.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Plan
Completed Date: 10/15/2007
Comments: DTSC approved the RAP and the Negative Declaration for the site. The site's soil is contaminated with elevated levels of polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), benzidine, lead and arsenic. The selected remedial alternative is

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

the excavation of all contaminated soil above site target criteria. The excavated soil will be removed and transported off-site for treatment/recycling or disposal. It is expected that approximately 100,000 tons on contaminated soil will be removed from the site. The excavated area will be restored by backfilling with clean imported soil, followed by compacting and grading.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/02/1994
Comments: PEA considered complete. Further investigation/remediation warranted in future on lo-priority basis.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/04/2006
Comments: DTSC completed review and suggested incorporation of acceptable response into subsequent quarterly reports.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/31/2005
Comments: Approved and asked to incoporate comments in the 2nd quarter report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/18/2006
Comments: Approved and recommended to incorporate comments in the 3rd quarter monitoring report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 05/25/2006
Comments: DTSC does not have any comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Report
Completed Date: 06/25/2007
Comments: DTSC approved the FS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/22/2006
Comments: DTSC approved the report with comments. However, recommened to incorporate DTSC's comments in the future reports.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/11/2007

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/11/2007
Comments: DTSC provided comments regrding the subject document.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 06/30/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 06/30/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Plan
Completed Date: 06/20/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 08/17/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/18/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/09/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 09/24/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 08/06/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 03/06/2012
Comments: Riverside MGP RACR final reviewed and approved

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/06/2009
Comments: DTSC approved the report. However, recommended not to discontinue Title 2 metal analysis. DTSC suggested to reduce the frequency of metal analysis from quarterly to annual basis.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 12/06/2008
Comments: DTSC scheduled a meeting to discuss internally.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application
Completed Date: 01/05/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 01/26/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/30/2010
Comments: RA Fieldwork Implemented

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Document Type: *Correspondence - Received
Completed Date: 11/05/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/23/2011
Comments: Supplemental fieldwork completed in support of Remedial Action

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 07/18/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Neg. Declaration
Completed Date: 10/15/2007
Comments: DTSC approved the Negative Declaration.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/09/2007
Comments: DTSC sent the cost estimate for the upcoming year.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/07/2009
Comments: Mailed the letter to the RP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/09/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 08/15/2008
Comments: DTSC sent a letter requesting voluntary site access for implementing the RAP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Voluntary Cleanup Agreement Completion
Completed Date: 08/20/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 10/19/2010

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Comments:	Draft and send out cost estimate letter for fiscal year 2010-2011

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	02/22/2010
Comments:	FMC Invite letter competed and sent out

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction
Completed Date:	06/01/2012
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Certification
Completed Date:	11/29/2012
Comments:	Not reported

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	5 Year Review Reports
Schedule Due Date:	04/15/2013
Schedule Revised Date:	Not reported

186
ENE
1/2-1
0.902 mi.
4764 ft.

WEILAND & COMPANY
3491 COMMERCE
RIVERSIDE, CA 92507

ENVIROSTOR **S107737593**
N/A

Relative:
Higher

Actual:
878 ft.

ENVIROSTOR:

Site Type:	Evaluation
Site Type Detailed:	Evaluation
Acres:	1.1
NPL:	NO
Regulatory Agencies:	SMBRP, US EPA
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	* Greg Holmes
Division Branch:	Cleanup Cypress
Facility ID:	60000227
Site Code:	Not reported
Assembly:	64
Senate:	31
Special Program:	EPA - PASI
Status:	Inactive - Needs Evaluation
Status Date:	03/06/2006
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not Applicable
Latitude:	33.98156
Longitude:	-117.3651

WEILAND & COMPANY (Continued) **S107737593**

APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	60000227
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	06/13/2006
Comments:	EPA Concurrence June 13,2006.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 42 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
RIVERSIDE	S106486916	RIVERSIDE PLUME	DOWNTOWN RIVERSIDE		SLIC
	S106838337	RIVERSIDE CITY, PUB WORKS DEPT	VARIOUS LOCATIONS IN SCAQMD	92504	EMI
RIVERSIDE	S106838339	RIVERSIDE CITY, PUB WORKS DEPT	VARIOUS LOCATIONS IN SCAQMD	92504	EMI
RIVERSIDE	S108985920	RIVERSIDE PLUME	N/A RIVERSIDE II BASIN		SLIC
RIVERSIDE	S109287719	LANDFILL,TEQUESQUITE-CLOSED	6253 TEQUESQUITE AVE.		LF,FINANCIAL ASSURANCE 1,LDS
RIVERSIDE	S109444534	GLEN AVON TRANSPORTATION YARD	4725 TROY CT	92509	LF,NPDES
RIVERSIDE	S109456226	RIVERSIDE ANIMAL SHELTER	W OF VAN BUREN BLVD & CLAY ST		NPDES
RIVERSIDE	S109693590	RIVERSIDE MINING LIMITED	3500 B PYRITE ST	92509	NPDES
RIVERSIDE	S110654910	SMITH PROPERTY	7TH ST & BROCKTON AVE	92507	LUST
RIVERSIDE	S110654911	U C RIVERSIDE PARKING LOT #6	UNIVERSITY OF CA, RIVERSIDE	92507	LUST
RIVERSIDE	S110731484	1899 05 RIVERSIDE E CA INTERIM STA	6250 VALLEY SPRINGS PARKWAY	92507	NPDES
RIVERSIDE	S110732124	BMD RIVERSIDE	555 PALMIRITA AVE	92507	NPDES
RIVERSIDE	S111213843	WEST RIVERSIDE LANDFILL - CLOSED	HALL AVE & HWY 60		ENF
RIVERSIDE	S111292570	RIVERSIDE CNTY FC & WCD	SW NOI LINEAR 1: NO FACILITY A		NPDES
RIVERSIDE	S112831928	CITY OF RIVERSIDE GRANITE PIT MINE	FREEMONT ST. & MOUNT VIEW AVE.		LF
RIVERSIDE	S112839819	RIVERSIDE COUNTY/BUILDING SERVICES	3133 7TH	92507	HAZNET
RIVERSIDE	S112840911	CITY OF RIVERSIDE	WATER RECLAIMATION PLANT	92504	HAZNET
RIVERSIDE	S112845143	1X RIVERSIDE UNIFIED SCHOOL DIST	RAMONA HIGH SCHOOL	00000	HAZNET
RIVERSIDE	S112848886	RIVERSIDE COUNTY TRANSPORTATION CO	1/4 MI WEST OF LA CADENA	92501	HAZNET
RIVERSIDE	S112857344	TICORE BUILDING/RIVERSIDE COUNTY	3490 TENTH STREET	92507	HAZNET
RIVERSIDE	S112862696	COUNTY OF RIVERSIDE	859 CENTER ST	92504	HAZNET
RUBIDOUX	S112863135	RIVERSIDE COUNTY TRANSPORTATION	6404 STOBBS	92509	HAZNET
RIVERSIDE	S112874208	COUNTY OF RIVERSIDE, ECONOMIC DEV.	11511 VENTURE DRIVE	92507	HAZNET
RUBIDOUX	S112874819	RIVERSIDE COUNTY HOUSING	FORT DRIVE	92509	HAZNET
RIVERSIDE	S112885373	JURUPA USD/WEST RIVERSIDE ELEM	9372 RIVERSIDE DR	92509	HAZNET
RIVERSIDE	S112887718	RIVERSIDE HOUSING AUTHORITY	3350 MULBERRY AVE	92506	HAZNET
RIVERSIDE	S112891930	CITY OF RIVERSIDE - PUBLIC WORKS	9644 - 9648 MAGNOLIA AVE	92506	HAZNET
RIVERSIDE	S112901478	CITY OF RIVERSIDE	KANSAS ST AT SPRUCE ST	92507	HAZNET
RIVERSIDE	S112901995	CITY OF RIVERSIDE	NE CORNER OF MAGNOLIA AVE & JU	92501	HAZNET
RUBIDOUX	S112902294	RUBIDOUX COMMUNITY SERVICES DISTRI	AGUA MANSA RD 300 FT N OF WILS	92509	HAZNET
RIVERSIDE	S112910625	HOUSING AUTHORITY COUNTY OF RIVERS	3841 THUR 3851 KIRTWOOD DRIVE	92506	HAZNET
RIVERSIDE	S112912772	RIVERSIDE COMMON INVESTORS D. BUTL	600 PALMYRITA	92501	HAZNET
RUBIDOUX	S112917173	COUNTY OF RIVERSIDE	NE CORNER OF MISSION & LARUE S	92509	HAZNET
RIVERSIDE	S112923932	DB HOLDING LLP DBA RIVERSIDE PLAZA	3862,3858 TYLER ST	92506	HAZNET
RIVERSIDE	S112928951	CNTY OF RIVERSIDE/EDA	5452, 5454, & 5458 MISSION BLV	92509	HAZNET
RIVERSIDE	S112930338	COUNTY OF RIVERSIDE REDEVELOPMENT	13653 MAGNOLIA AVE	92506	HAZNET
RIVERSIDE	S112931299	TORO OF RIVERSIDE	6490 INDUSTRIAL	92506	HAZNET
RIVERSIDE	S112932266	CITY OF RIVERSIDE	7950 HOLDEN AVE	92504	HAZNET
RUBIDOUX	S112936725	COUNTY OF RIVERSIDE - ECONOMIC DEV	5701 & 5713 MISSION BLVD	92509	HAZNET
RIVERSIDE	S112941361	RIVERSIDE MEDICAL CLINIC	3539,3551,3561,3573 HARDING ST	92504	HAZNET
RIVERSIDE	S112942139	COUNTY OF RIVERSIDE	5285,5293,5246,5253	92509	HAZNET
BLYTHE	U001576259	BLYTHE AIRPORT	HIGHWAY 60	92501	HIST UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 12

Source: EPA
Telephone: N/A
Last EDR Contact: 05/09/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 12

Source: EPA
Telephone: N/A
Last EDR Contact: 05/09/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/01/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: N/A
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 05/09/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/04/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: 703-412-9810
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 04/05/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 06/10/2013
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/31/2012	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/09/2012	Telephone: 703-603-8704
Date Made Active in Reports: 12/20/2012	Last EDR Contact: 04/10/2013
Number of Days to Update: 72	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/05/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: 703-412-9810
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 04/05/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 03/11/2013
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 6

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/19/2012
Date Data Arrived at EDR: 12/26/2012
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 12/19/2012
Date Data Arrived at EDR: 12/26/2012
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/18/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 29

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 04/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/18/2013
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 30

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/18/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/01/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 162

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/01/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Semi-Annually

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 04/18/2013
Number of Days to Update: 30

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-5092
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/21/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 45

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/02/2012
Date Data Arrived at EDR: 08/03/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 94

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/07/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 156

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/18/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 14

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/05/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/10/2012
Date Data Arrived at EDR: 12/11/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/26/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: No Update Planned

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 02/11/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/19/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 05/03/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/14/2012
Date Data Arrived at EDR: 12/11/2012
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 66

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/04/2013
Next Scheduled EDR Contact: 06/17/2013
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2012
Date Data Arrived at EDR: 09/12/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 03/04/2013
Next Scheduled EDR Contact: 06/17/2013
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/16/2012
Date Data Arrived at EDR: 03/26/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/11/2013
Date Data Arrived at EDR: 03/12/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/12/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/06/2012
Date Data Arrived at EDR: 01/29/2013
Date Made Active in Reports: 03/19/2013
Number of Days to Update: 49

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 05/01/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 15

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 01/15/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 57

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/13/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2011
Date Data Arrived at EDR: 09/08/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 21

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/06/2013
Next Scheduled EDR Contact: 06/17/2013
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 09/01/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 131

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/26/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/28/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Every 4 Years

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 60

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/08/2013
Date Data Arrived at EDR: 01/09/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/11/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/23/2011
Date Data Arrived at EDR: 12/13/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 79

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/12/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/08/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/10/2012
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/26/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/18/2013
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/18/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Quarterly

UIC: UIC Listing

A listing of underground control injection wells.

Date of Government Version: 03/05/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/19/2013
Next Scheduled EDR Contact: 12/31/2012
Data Release Frequency: Varies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 01/02/2013
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 04/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 12/12/2012
Date Made Active in Reports: 01/04/2013
Number of Days to Update: 23

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 12/24/2012
Data Release Frequency: Annually

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 01/08/2013
Date Data Arrived at EDR: 01/29/2013
Date Made Active in Reports: 03/19/2013
Number of Days to Update: 49

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 06/22/2012
Date Made Active in Reports: 07/06/2012
Number of Days to Update: 14

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/29/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 11/20/2012
Date Data Arrived at EDR: 11/30/2012
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 02/19/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/03/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/19/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 03/06/2013
Date Data Arrived at EDR: 03/12/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 13

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 04/18/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/15/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/15/2013
Date Data Arrived at EDR: 01/15/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/16/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/25/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 27

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/26/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/19/2013
Date Data Arrived at EDR: 02/20/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 28

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/18/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 05/03/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List
The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/15/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: N/A

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 12/02/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/04/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Quarterly

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 11/15/2012
Date Data Arrived at EDR: 11/16/2012
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 91

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 11/15/2012
Date Data Arrived at EDR: 11/16/2012
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 91

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Annually

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/13/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/12/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/16/2013
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 36

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Semi-Annually

Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 01/16/2013
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 01/31/2013
Number of Days to Update: 14

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List
Cupa Facility List

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 04/04/2013
Number of Days to Update: 21

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 10/16/2012
Date Data Arrived at EDR: 10/17/2012
Date Made Active in Reports: 11/13/2012
Number of Days to Update: 27

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 04/29/2013
Data Release Frequency: Varies

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/21/2012
Date Data Arrived at EDR: 01/04/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 49

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 01/04/2013
Date Data Arrived at EDR: 01/14/2013
Date Made Active in Reports: 03/01/2013
Number of Days to Update: 46

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/11/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/27/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 01/15/2013
Number of Days to Update: 48

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/09/2013
Date Data Arrived at EDR: 01/10/2013
Date Made Active in Reports: 02/25/2013
Number of Days to Update: 46

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/27/2013
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 25

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 02/07/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 03/01/2013
Number of Days to Update: 21

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 05/01/2012
Date Data Arrived at EDR: 05/02/2012
Date Made Active in Reports: 06/11/2012
Number of Days to Update: 40

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/26/2012
Date Data Arrived at EDR: 06/27/2012
Date Made Active in Reports: 08/17/2012
Number of Days to Update: 51

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/11/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/13/2013
Date Made Active in Reports: 03/21/2013
Number of Days to Update: 36

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/12/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/25/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 12/28/2012
Date Made Active in Reports: 01/25/2013
Number of Days to Update: 28

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/21/2013
Date Data Arrived at EDR: 01/22/2013
Date Made Active in Reports: 03/19/2013
Number of Days to Update: 56

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/24/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 02/18/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/30/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 32

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/25/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 61

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/14/2013
Date Data Arrived at EDR: 01/15/2013
Date Made Active in Reports: 01/31/2013
Number of Days to Update: 16

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 12/20/2012
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 50

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 11/26/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 01/21/2013
Number of Days to Update: 54

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/25/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 27

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/08/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 17

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 03/04/2013
Next Scheduled EDR Contact: 06/17/2013
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/04/2013
Next Scheduled EDR Contact: 06/17/2013
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/04/2013
Next Scheduled EDR Contact: 06/17/2013
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/08/2013
Date Data Arrived at EDR: 03/08/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 17

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 03/08/2013
Next Scheduled EDR Contact: 05/20/2013
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 22

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/13/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/19/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 29

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/12/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 37

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/12/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/12/2013
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 14

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/05/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 43

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/05/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 50

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/29/2012
Date Data Arrived at EDR: 01/10/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 43

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/02/2012
Date Data Arrived at EDR: 01/15/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 38

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/05/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 20

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/11/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 08/17/2012
Date Data Arrived at EDR: 08/20/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 44

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 03/12/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 02/11/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 02/11/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/25/2013
Date Data Arrived at EDR: 03/25/2013
Date Made Active in Reports: 04/18/2013
Number of Days to Update: 24

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 02/26/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 27

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 01/02/2013
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 03/12/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/05/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 03/04/2013
Next Scheduled EDR Contact: 06/17/2013
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/06/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 19

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 03/04/2013
Next Scheduled EDR Contact: 06/17/2013
Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 34

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/11/2013
Next Scheduled EDR Contact: 05/27/2013
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 02/26/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 22

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 12/12/2012
Date Data Arrived at EDR: 12/17/2012
Date Made Active in Reports: 01/22/2013
Number of Days to Update: 36

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/12/2012
Date Data Arrived at EDR: 12/17/2012
Date Made Active in Reports: 01/25/2013
Number of Days to Update: 39

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 01/10/2013
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 42

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/02/2013
Date Data Arrived at EDR: 01/02/2013
Date Made Active in Reports: 01/25/2013
Number of Days to Update: 23

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/14/2013
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 42

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/30/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/06/2012
Number of Days to Update: 42

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/21/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/18/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 01/28/2013
Date Data Arrived at EDR: 02/01/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 47

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/29/2013
Next Scheduled EDR Contact: 05/13/2013
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/04/2012
Date Data Arrived at EDR: 12/20/2012
Date Made Active in Reports: 01/25/2013
Number of Days to Update: 36

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 12/19/2012
Date Data Arrived at EDR: 12/28/2012
Date Made Active in Reports: 01/30/2013
Number of Days to Update: 33

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 03/05/2013
Date Data Arrived at EDR: 03/06/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 19

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/18/2013
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 03/21/2013
Number of Days to Update: 31

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/18/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 02/07/2013
Date Made Active in Reports: 03/15/2013
Number of Days to Update: 36

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/09/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/23/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 57

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/23/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 06/22/2012
Date Made Active in Reports: 07/31/2012
Number of Days to Update: 39

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 09/27/2012
Number of Days to Update: 70

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA AVENUE
RIVERSIDE, CA 92506

TARGET PROPERTY COORDINATES

Latitude (North):	33.9765 - 33˚ 58' 35.40''
Longitude (West):	117.3823 - 117˚ 22' 56.28''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	464684.8
UTM Y (Meters):	3759421.8
Elevation:	822 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	33117-H4 RIVERSIDE WEST, CA
Most Recent Revision:	1980
East Map:	33117-H3 RIVERSIDE EAST, CA
Most Recent Revision:	1980

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

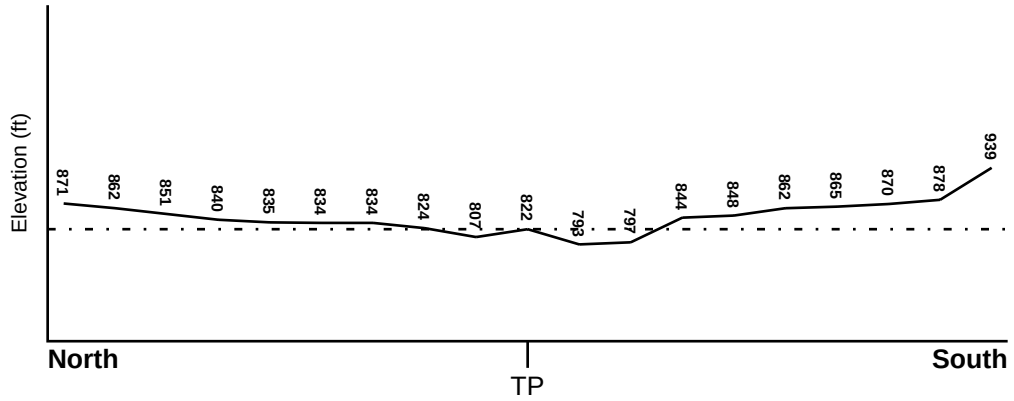
TOPOGRAPHIC INFORMATION

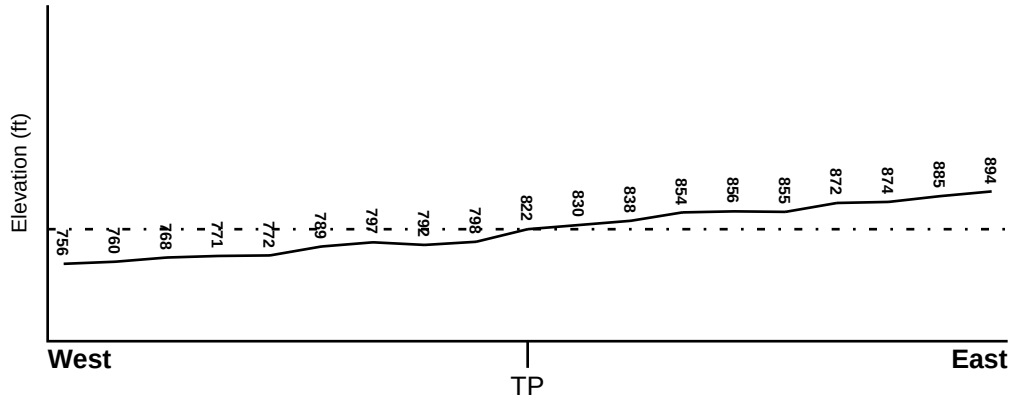
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 822 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
RIVERSIDE, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06065C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
2	1/8 - 1/4 Mile ENE	SW
3	1/4 - 1/2 Mile NNW	Not Reported
A4	1/4 - 1/2 Mile NE	Not Reported
A5	1/4 - 1/2 Mile NE	Not Reported
6	1/4 - 1/2 Mile East	W
C9	1/2 - 1 Mile ESE	Not Reported
C10	1/2 - 1 Mile ESE	Not Reported
28	1/2 - 1 Mile ENE	WSW
29	1/2 - 1 Mile ESE	Not Reported

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

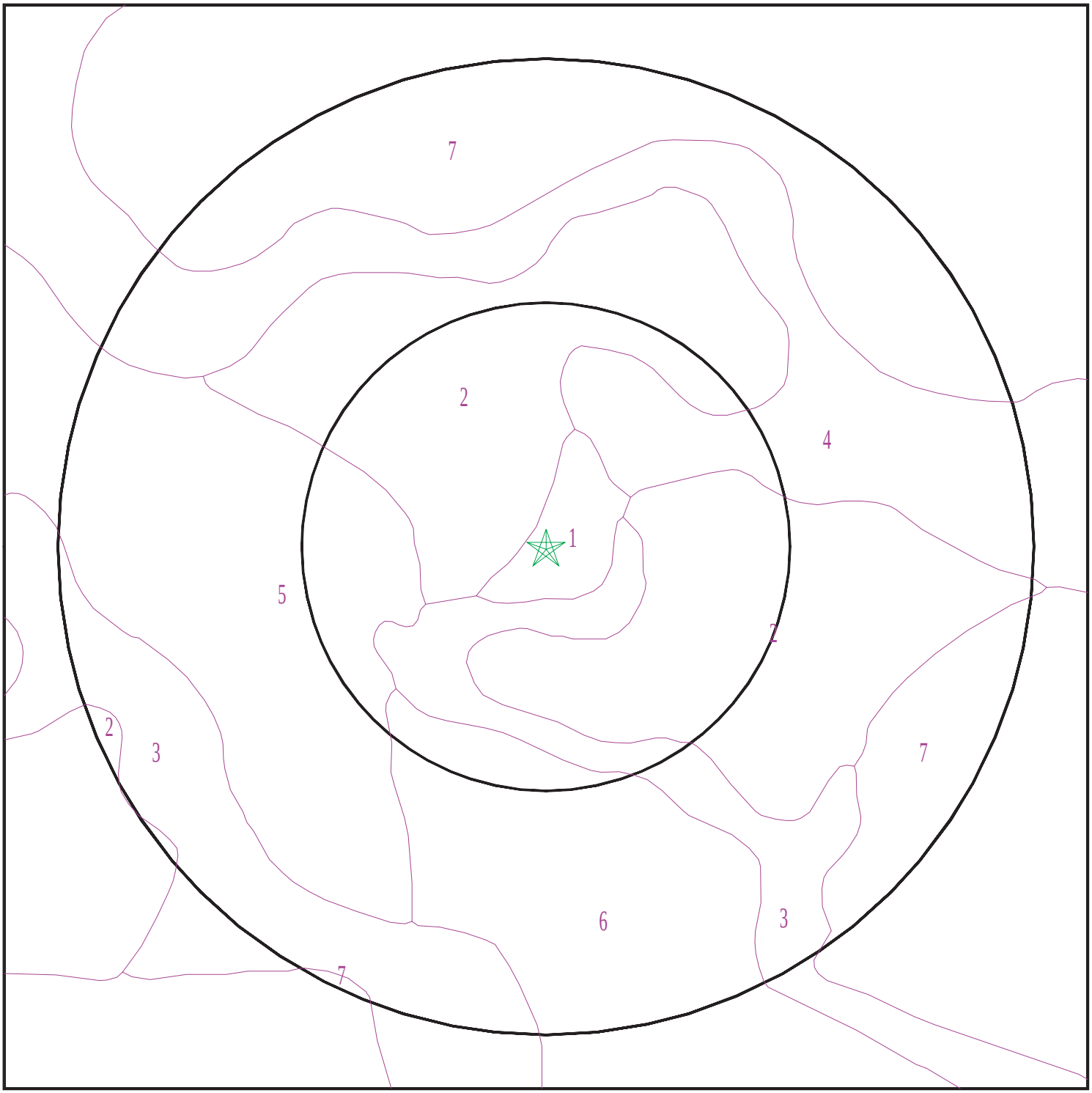
Era:	Mesozoic
System:	Cretaceous
Series:	Cretaceous granitic rocks
Code:	Kg *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 3602238.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Riverside Community Hospital	CLIENT:	Dudek & Associates
ADDRESS:	4445 Magnolia Avenue Riverside CA 92506	CONTACT:	Rachel Ganiere
		INQUIRY #:	3602238.2s
LAT/LONG:	33.9765 / 117.3823	DATE:	May 09, 2013 3:06 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: HANFORD

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6
2	7 inches	40 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6
3	40 inches	59 inches	stratified loamy sand to coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: ARLINGTON

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6
2	11 inches	50 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6
3	50 inches	59 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6
4	59 inches	70 inches	coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6

Soil Map ID: 3

Soil Component Name: Terrace escarpments

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 4

Soil Component Name: ARLINGTON

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	11 inches	50 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6
3	50 inches	59 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6
4	59 inches	70 inches	coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6

Soil Map ID: 5

Soil Component Name: CHINO

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	14 inches	27 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	27 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 6

Soil Component Name: HANFORD

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6
2	7 inches	40 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6
3	40 inches	59 inches	stratified loamy sand to coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6

Soil Map ID: 7

Soil Component Name: BUREN

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
2	11 inches	27 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
3	27 inches	37 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
4	37 inches	57 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000139472	1/8 - 1/4 Mile WNW
B7	USGS40000139374	1/4 - 1/2 Mile SSE
D12	USGS40000139370	1/2 - 1 Mile SSE
E14	USGS40000139358	1/2 - 1 Mile SSE
F16	USGS40000139444	1/2 - 1 Mile East
F17	USGS40000139443	1/2 - 1 Mile East
H23	USGS40000139501	1/2 - 1 Mile ENE
24	USGS40000139438	1/2 - 1 Mile East

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

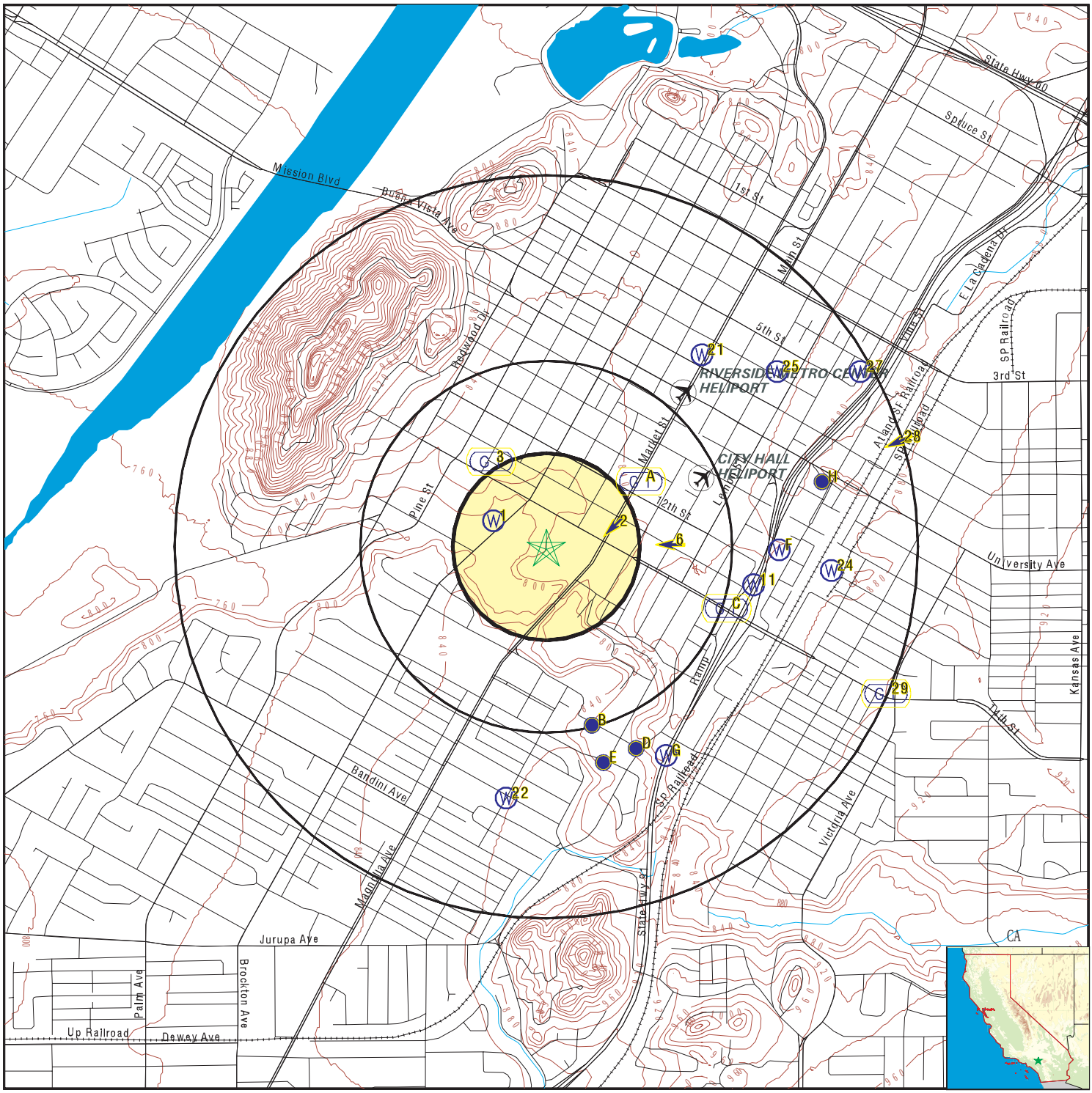
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B8	2534	1/2 - 1 Mile SSE
11	2530	1/2 - 1 Mile East
D13	2537	1/2 - 1 Mile SSE
E15	2536	1/2 - 1 Mile SSE
G18	3541	1/2 - 1 Mile SSE
G19	3542	1/2 - 1 Mile SSE
G20	3543	1/2 - 1 Mile SSE
21	CADW50000003929	1/2 - 1 Mile NE
22	2535	1/2 - 1 Mile South
25	2531	1/2 - 1 Mile NE
H26	2529	1/2 - 1 Mile ENE
27	2532	1/2 - 1 Mile ENE

PHYSICAL SETTING SOURCE MAP - 3602238.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

SITE NAME: Riverside Community Hospital	CLIENT: Dudek & Associates
ADDRESS: 4445 Magnolia Avenue Riverside CA 92506	CONTACT: Rachel Ganiere
LAT/LONG: 33.9765 / 117.3823	INQUIRY #: 3602238.2s
	DATE: May 09, 2013 3:06 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
1 **WNW** **1/8 - 1/4 Mile** **Lower**		**FED USGS**	**USGS40000139472**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335839117230201		
Monloc name:	002S005W22R001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.9775151
Longitude:	-117.3847674	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	246
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

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2 **ENE** **1/8 - 1/4 Mile** **Higher**	Site ID:	083300555T	**AQUIFLOW**	**50778**
	Groundwater Flow:	SW		
	Shallow Water Depth:	59.29		
	Deep Water Depth:	65.94		
	Average Water Depth:	60		
	Date:	09/1995		

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3 **NNW** **1/4 - 1/2 Mile** **Higher**	Site ID:	083301365T	**AQUIFLOW**	**66435**
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	55’		
	Date:	04/18/1995		

A4 **NE** **1/4 - 1/2 Mile** **Higher**	Site ID:	083301058T	**AQUIFLOW**	**50792**
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	70		
	Date:	02/28/1997		

Map ID Direction Distance Elevation			Database	EDR ID Number
A5 **NE** **1/4 - 1/2 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083301058T Not Reported Not Reported Not Reported 70 02/28/1997	**AQUIFLOW**	**50791**
6 **East** **1/4 - 1/2 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	083301572T W 62.50 76.13 Not Reported 01/23/1997	**AQUIFLOW**	**50783**

B7
SSE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000139374**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335810117224701		
Monloc name:	002S005W26E002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.9696111
Longitude:	-117.3805278	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	816.85
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Reported		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	346
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

B8
SSE
1/2 - 1 Mile
Lower

CA WELLS **2534**

Water System Information:

Prime Station Code:	02S/05W-26E02 S	User ID:	WAT
FRDS Number:	3310031070	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Agricultural/Irrigation Well
Source Lat/Long:	335810.0 1172244.5	Precision:	10 Feet (1/10 Second)
Source Name:	OLIVEWOOD WELL 02 - AGRICULTURAL		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

C9
ESE
1/2 - 1 Mile
Higher

Site ID:	083302925T	**AQUIFLOW**	**54885**
Groundwater Flow:	Not Reported		
Shallow Water Depth:	92		
Deep Water Depth:	94		
Average Water Depth:	Not Reported		
Date:	11/24/1998		

C10
ESE
1/2 - 1 Mile
Higher

Site ID:	083302925T	**AQUIFLOW**	**54886**
Groundwater Flow:	Not Reported		
Shallow Water Depth:	92		
Deep Water Depth:	94		
Average Water Depth:	Not Reported		
Date:	11/24/1998		

11
East
1/2 - 1 Mile
Higher

CA WELLS **2530**

Water System Information:

Prime Station Code:	02S/05W-23Q01 S	User ID:	WAT
FRDS Number:	3310031016	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	335830.5 1172218.8	Precision:	10 Feet (1/10 Second)
Source Name:	ELEVENTH ST. WELL - INACTIVE		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

D12
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS40000139370**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335807117223801		
Monloc name:	002S005W26F001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.9686264
Longitude:	-117.3781004	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	396
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D13
SSE **CA WELLS** **2537**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/05W-26M01 S	User ID:	WAT
FRDS Number:	3310031072	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Agricultural/Irrigation Well
Source Lat/Long:	335807.6 1172238.3	Precision:	10 Feet (1/10 Second)
Source Name:	OLIVEWOOD WELL 03 - AGRICULTURAL		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

E14
SSE **FED USGS** **USGS40000139358**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335805117224401		
Monloc name:	002S005W26M001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.9680708
Longitude:	-117.379767	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

E15
SSE **CA WELLS** **2536**
1/2 - 1 Mile
Lower

Water System Information:

Prime Station Code:	02S/05W-26F01 S	User ID:	WAT
FRDS Number:	3310031069	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Agricultural/Irrigation Well
Source Lat/Long:	335805.4 1172243.8	Precision:	10 Feet (1/10 Second)
Source Name:	OLIVEWOOD WELL 01 - AGRICULTURAL		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

F16
East **FED USGS** **USGS40000139444**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335835117221502		
Monloc name:	002S005W23Q003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.9764041
Longitude:	-117.3717114	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	397
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

F17
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000139443**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335835117221501		
Monloc name:	002S005W23Q001S		
Monloc type:	Well		
Monloc desc:	NAWQA DATA ENTRY COM + VER 06/19/2000 SNHAMLIN		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.9763556
Longitude:	-117.3710444	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	860
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Cenozoic Erathem		
Aquifer type:	Unconfined single aquifer		
Construction date:	Not Reported	Welldepth:	440
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-06-04	85.1		2000-03-29	80	

G18
SSE
1/2 - 1 Mile
Higher

CA WELLS **3541**

Water System Information:

Prime Station Code:	03S/05W-06Q03 S	User ID:	WAT
FRDS Number:	3310031003	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	335806.0 1172233.2	Precision:	10 Feet (1/10 Second)
Source Name:	ARMY WELL 03 - INACTIVE		

System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

G19
SSE **CA WELLS** **3542**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	03S/05W-06Q04 S	User ID:	WAT
FRDS Number:	3310031055	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	335806.0 1172233.2	Precision:	10 Feet (1/10 Second)
Source Name:	ISELIN WELL 01 - INACTIVE		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

G20
SSE **CA WELLS** **3543**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	03S/05W-06Q05 S	User ID:	WAT
FRDS Number:	3310031056	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	335806.0 1172233.2	Precision:	10 Feet (1/10 Second)
Source Name:	ISELIN WELL 02 - INACTIVE		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

21
NE **CA WELLS** **CADW50000003929**
1/2 - 1 Mile
Lower

Latitude :	33.984		
Longitude :	117.375		
Site code:	339840N1173750W001	Casgem sta:	02S05W23F001S
Local well:	Fox metro	Casgem s 1:	Observation
County id:	33		
Basin cd:	8-2.03	Basin desc:	Riverside-Arlington
Org unit n:	Southern Region Office	Site id:	CADW50000003929

22
South **CA WELLS** **2535**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/05W-26E25 S	User ID:	WAT
FRDS Number:	3310031071	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Agricultural/Irrigation Well
Source Lat/Long:	335800.0 1172300.0	Precision:	Undefined
Source Name:	OLIVEWOOD WELL 02 - AGRICULTURAL		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

H23
ENE **FED USGS** **USGS40000139501**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335845117220801		
Monloc name:	002S005W23J001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.9791819
Longitude:	-117.3697669	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	300
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

24
East **FED USGS** **USGS40000139438**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-335832117220501		
Monloc name:	002S005W23R001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.9755708
Longitude:	-117.3689335	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	358
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

25
NE **CA WELLS** **2531**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/05W-23Q03 S	User ID:	WAT
FRDS Number:	3310031025	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Agricultural/Irrigation Well
Source Lat/Long:	335900.0 1172214.6	Precision:	10 Feet (1/10 Second)
Source Name:	FREEWAY WELL - AGRICULTURAL		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET		
	RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		

Map ID Direction Distance Elevation	Database	EDR ID Number
H26 **ENE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**2529**

Water System Information:

Prime Station Code:	02S/05W-23J01 S	User ID:	WAT
FRDS Number:	3310031068	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	335844.2 1172205.7	Precision:	10 Feet (1/10 Second)
Source Name:	MULBERRY - INACTIVE		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		
Sample Collected:	07/20/2006	Findings:	5. UNITS
Chemical:	COLOR		

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27 **ENE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**2532**

Water System Information:

Prime Station Code:	02S/05W-23R01 S	User ID:	WAT
FRDS Number:	3310031019	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	335900.0 1172200.0	Precision:	Undefined
Source Name:	FILL WELL - INACTIVE		
System Number:	3310031		
System Name:	Riverside, City of		
Organization That Operates System:			
	3900 MAIN STREET RIVERSIDE, CA 92522		
Pop Served:	245000	Connections:	58586
Area Served:	RIVERSIDE		
Sample Collected:	02/17/2011	Findings:	1100. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	02/17/2011	Findings:	7.3
Chemical:	PH, LABORATORY		
Sample Collected:	02/17/2011	Findings:	250. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	02/17/2011	Findings:	300. MG/L
Chemical:	BICARBONATE ALKALINITY		

Sample Collected:	02/17/2011	Findings:	380. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	02/17/2011	Findings:	110. MG/L
Chemical:	CALCIUM		
Sample Collected:	02/17/2011	Findings:	24. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	02/17/2011	Findings:	72. MG/L
Chemical:	SODIUM		
Sample Collected:	02/17/2011	Findings:	4.3 MG/L
Chemical:	POTASSIUM		
Sample Collected:	02/17/2011	Findings:	100. MG/L
Chemical:	CHLORIDE		
Sample Collected:	02/17/2011	Findings:	620. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02/17/2011	Findings:	- 0.16
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	02/17/2011	Findings:	69. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/17/2011	Findings:	25000. UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	02/17/2011	Findings:	8.2e-002 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	02/17/2011	Findings:	12.
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	02/17/2011	Findings:	16000. UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	06/17/2011	Findings:	1000. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	06/17/2011	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	06/17/2011	Findings:	250. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	06/17/2011	Findings:	300. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	06/17/2011	Findings:	380. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	06/17/2011	Findings:	110. MG/L
Chemical:	CALCIUM		
Sample Collected:	06/17/2011	Findings:	24. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	06/17/2011	Findings:	73. MG/L
Chemical:	SODIUM		
Sample Collected:	06/17/2011	Findings:	4.3 MG/L
Chemical:	POTASSIUM		

Sample Collected:	06/17/2011	Findings:	100. MG/L
Chemical:	CHLORIDE		
Sample Collected:	06/17/2011	Findings:	630. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	06/17/2011	Findings:	- 0.15
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	06/17/2011	Findings:	69. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/17/2011	Findings:	14000. UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	06/17/2011	Findings:	0.11 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	06/17/2011	Findings:	13.
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	06/17/2011	Findings:	16000. UG/L
Chemical:	NITRATE + NITRITE (AS N)		

28
ENE
1/2 - 1 Mile
Higher

Site ID:	083302339T	**AQUIFLOW**	**50986**
Groundwater Flow:	WSW		
Shallow Water Depth:	65 ft		
Deep Water Depth:	70 ft		
Average Water Depth:	Not Reported		
Date:	05/1994		

29
ESE
1/2 - 1 Mile
Higher

Site ID:	083302092T	**AQUIFLOW**	**66425**
Groundwater Flow:	Not Reported		
Shallow Water Depth:	Not Reported		
Deep Water Depth:	Not Reported		
Average Water Depth:	95’		
Date:	12/07/1992		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92506	22	1

Federal EPA Radon Zone for RIVERSIDE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92506

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.700 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Soil Sampling Related to Piping Upgrade

Riverside Community Hospital, 4445 Magnolia Avenue, Riverside, California

AGE Project No. RC 685G5.1262
01 July 2004

PREPARED FOR:
California Hazardous Services

SUBMITTED TO:
County of Riverside – Department of Environmental Health

PREPARED BY:

Advanced GeoEnvironmental, Inc.

381 Thor Place, Brea, California 92821, Phone (714) 529-0200 • Fax(714) 529-0203
837 Shaw Road, Stockton, California 95215, Phone (209) 467-1006 • Fax (209) 467-1118
2318 Fourth Street, Santa Rosa, California 95404, Phone (707) 570-1418 • Fax (707) 570-1461
395 Del Monte Center, #111, Monterey, California 93940, Phone (800) 511-9300 • Fax (831) 394-5979

Advanced
GeoEnvironmental, Inc.

01 July 2004
AGE Project No. RC 685G5.1262

Mr. Jeff Henley
California Hazardous Services
3132 West Adams Street
Santa Ana, California 92704

Subject: **Soil Sampling Related to Piping Upgrade -**
Riverside Community Hospital, 4445 Magnolia Avenue, Riverside, California

Dear Mr. Henley:

In accordance with your request, we are submitting this report in conjunction with soil sampling and analysis related to a piping upgrade at the above referenced address.

The opportunity to provide this service is greatly appreciated. If you have any questions regarding this matter, please contact our office at (714) 529-0200.

Sincerely,

***Advanced* GeoEnvironmental, Inc.**

ROBERT D. LOEFFLER
No. 6709
STATE OF CALIFORNIA

Robert D. Loeffler
Project Geologist
California Registered Geologist No. 6709

Enclosures

cc: (2) addressee
(1) Mr. Roy Bryant – County of Riverside – Department of Environmental Health

381 Thor Place, Brea, California 92821
Telephone (714) 529-0200 FAX (714) 529-0203

Soil Sampling Related to Piping Upgrade
Riverside Community Hospital
4445 Magnolia Avenue, Riverside, California

1.0. INTRODUCTION

Advanced GeoEnvironmental, Inc. (AGE) was retained by California Hazardous Services (CHS) to collect and analyze soil samples related to the upgrade of product lines at the referenced address.

The piping at the site is related to an underground diesel tank and fuel system for a back-up generator and boilers. The tank is located in a driveway that is related to a new building that is currently being constructed. The location of the piping, UST and the immediately surrounding features are depicted on Figure 1 – *Site Plan*.

2.0. PROCEDURES

On 18 June 2004, three soil samples (samples P1 through P3) were collected from areas beneath the piping run (Figure 1). Soil samples along the product lines were collected by hand augering to a depth of approximately 2 feet below the exposed piping. Soil sampling activities were performed by Mr. Robert Loeffler, California Registered Geologist No. 6709. Mr. Roy Bryant of the County of Riverside – Department of Environmental Health (RDEH) directed soil sampling activities.

Each soil sample was retrieved from the hand auger bucket and compacted into a new 2" x 3" brass sleeve. The ends of the sleeve were covered with Teflon sheets and capped. The sleeves were labeled and sealed with evidence tape by Mr. Bryant. The samples were placed in a chilled container.

The samples were transported under chain-of-custody for analysis to CalTech Environmental Laboratories (CTEL). The samples were analyzed for total petroleum hydrocarbons as diesel (TPH-d), volatile organic compounds (VOCs) with fuel oxygenates in accordance with EPA methods 8015-modified for diesel and 8260B, respectively.

3.0. FINDINGS

No hydrocarbon odor or discoloration were observed in the samples. TPH-d, VOCs and fuel oxygenates were not detected in any of the soil samples collected. The original laboratory report (CTEL 186-0406193) and chain-of-custody form are attached.

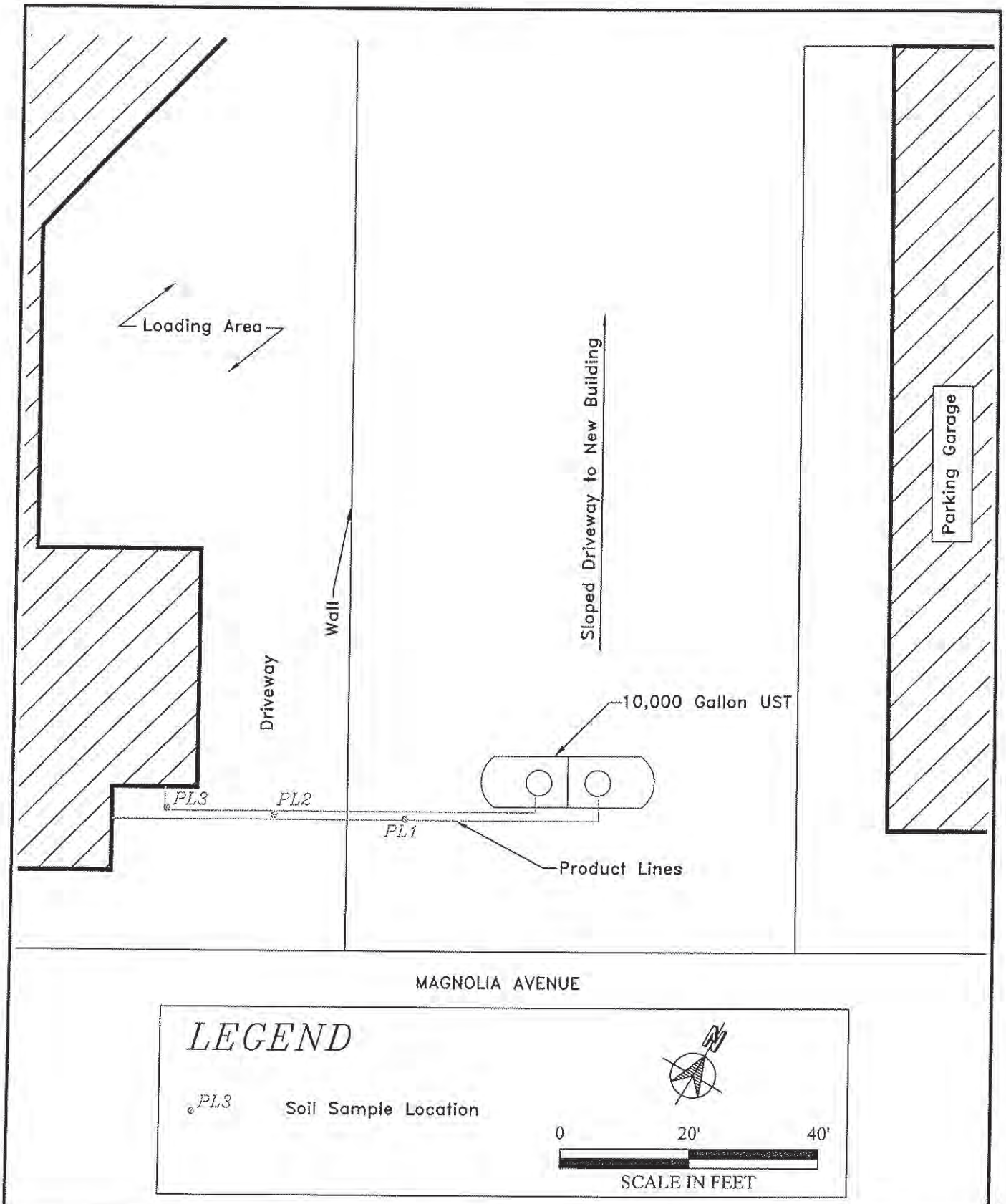
4.0. CONCLUSIONS

Based on field observations and the analytical results, there was no evidence of a release from the piping area. AGE recommends that the RDEH consider granting closure to the former piping.

5.0. LIMITATIONS

Our professional services were performed using that degree of care and skill ordinarily exercised by environmental consultants practicing in this or similar localities. The findings were based mainly upon analytical results provided by an independent laboratory. Evaluation of the subsurface conditions at the site for the purpose of this investigation was made from a limited number of available data points (i.e. soil samples). Subsurface conditions may vary away from these data points. No other warranty, expressed or implied, is made as to the professional findings contained in this report.

FIGURES



Advanced GeoEnvironmental, Inc.

FIGURE 1 - SITE PLAN

Riverside Community Hospital
4445 Magnolia Avenue
Riverside, California

Project No.: RC 685G5.1262

Date: 01 July 2004

LABORATORY RESULTS

CAL TECH Environmental Laboratories
6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2200 Fax: (562) 272-2789

ANALYTICAL RESULTS*

CTEL Project No: CT186-0406193
Client Name: California Hazardous Services, Inc.
3132 West Adams Street
Santa Ana, CA 92704
Phone: (714) 434-9995
Fax: (714) 434-9998
Attention: Mr. Jeff Henley

Project ID:
Project Name: Riverside Community Hospital

Date Sampled: 06/18/04 @ 14:00 p.m.
Date Received: 06/21/04 @ 12:30 p.m.
Date Analyzed 06/22/04
Matrix: Soil

Laboratory ID:	0406-193-1	0406-193-2	0406-193-3	**Method**	**Units:**	**Detection Limit**
Client Sample ID:	PL1	PL2	PL3			
Dilution	1	1	1			
Dichlorodifluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichlorofluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Iodomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Acetone	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
t-Butyl Alcohol (TBA)	ND	ND	ND	EPA 8260B	mg/Kg	0.25
Methylene Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.02
Freon 113	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Carbon disulfide	ND	ND	ND	EPA 8260B	mg/Kg	0.005
trans,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl acetate	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Diisopropyl Ether (DIPE)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Methyl Ethyl Ketone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
cis,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
1,1,1-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Carbon Tetrachloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Benzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
t-Amyl Methyl Ether (TAME)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
1,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromodichloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chloroethylvinylether	ND	ND	ND	EPA 8260B	mg/Kg	0.005
cis,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Methyl-2-pentanone(MI)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
trans,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Toluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,2-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005

(Continued)

CTEL Project No: CT186-0406193

Project ID:
Project Name: Riverside Community Hospital

Laboratory ID: **Client Sample ID:**	0406-193-1 PL1	0406-193-2 PL2	0406-193-3 PL3	**Method**	**Units**	**Detection Limit**
1,2-Dibromoethane(EDB)	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Hexanone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Tetrachloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,1,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
m.p-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromoform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Styrene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
o-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,2,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Isopropylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Propylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3,5-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
tert-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
sec-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,4-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
p-Isopropyltoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2 Dibromo-3-Chloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Naphthalene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Hexachlorobutadiene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
TPH – Diesel	ND	ND	ND	EPA 8015M	mg/Kg	10

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY			Control Limit
Dibromofluoromethane	112	93	90	70-130
1,2 Dichloromethaned4	121	115	110	70-130
Toluene-d8	109	92	97	70-130
Bromofluorobenzene	100	109	110	70-130

R. Tejirian for

Greg Tejirian
Laboratory Director

*The results are base upon the sample received.

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

CAL TECH Environmental Laboratories
6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

Lab Job No. 06-193 Page 1 of 1

Chain of Custody Record

Client: California Hazardous Services
Contact: Jeff Henley
Address: 3132 West Adams Street
Santa Ana, CA 92704
Project: Riverside Community Hospital
Sampled By: Rob Loeffler
Name/Signature

Phone: (714) 434-9995
Fax: (714) 434-9998

Turn Around Time
Rush
Normal X

Analyses Requested

Lab ID Number	Field ID	Date/Time Sampled	Bottle Type	No.	Preserv.	Matrix	8015m-Diesel	8260B								Comments
	PL1	6/18/04	BRASS	1		SOIL	X	X								
	PL2	6/18/04	BRASS	1		SOIL	X	X								
	PL3	6/18/04	BRASS	1		SOIL	X	X								

Relinquished: Date / Time: 6/21/04 Received:

Dispatched : Date / Time: Carrier:

I hereby authorize the performance of the above indicated tests.

Date / Time: 6-21-04 / 12:30 pm Received by lab: R. Taylor

Custody seal(s) in tact upon receipt by lab? YES NO NONE

CTELCCR.DOC

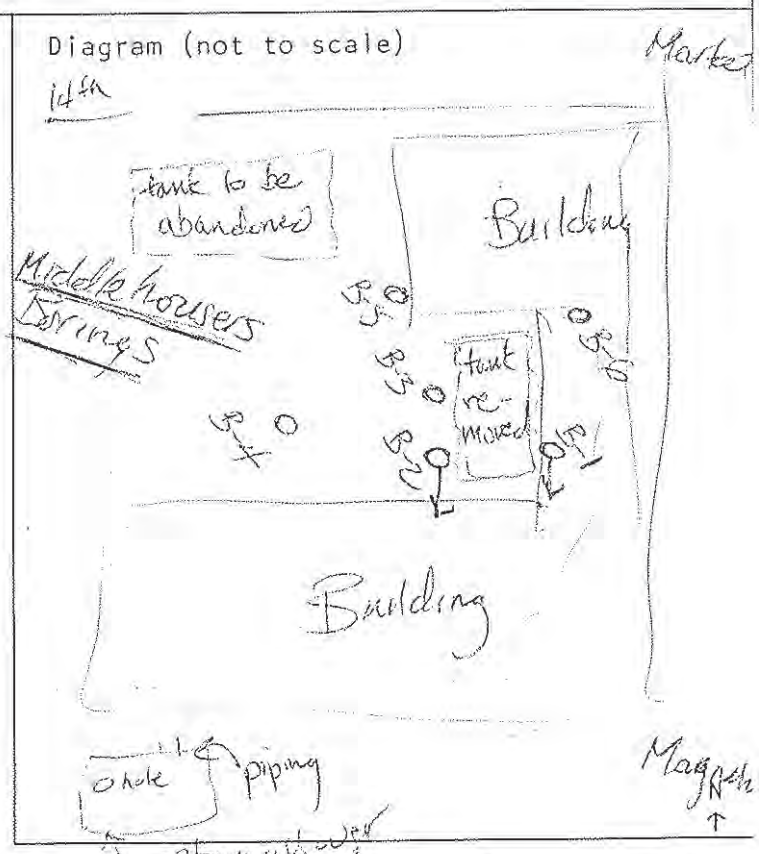
COUNTY OF RIVERSIDE, DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH DIVISION
HAZARDOUS MATERIALS MANAGEMENT BRANCH
UNDERGROUND STORAGE TANK CLOSURE INSPECTION REPORT

Date 6/22/89 Time Arrived 1:15 p.m. Time Departed 3:00 p.m. Temp. Closure ____
Facility Name Riverside Community Hosp Plan Check # 89-056 ~~88-330~~ Removal ✓
Address 4445 Magnolia Contact Roland Wood Abandonment ____
Contractor Elmer J Wood 683-6930 No. of Tanks Closed 1
Health Personnel Brad N / Tunde / Mike D / Wendy No. of Tanks Remaining 2 (1 abandon, 1 new)
Fire Personnel N/A

I. Temporary Closure

	Yes	No	N/A	
1	( )	( )	( )	Valid Closure Permit
2	( )	( )	( )	Tank Contents Removed
3	( )	( )	( )	Witnessed Sticking of Tank(s)
4	( )	( )	( )	Flammable Vapors Purged
5	( )	( )	( )	Tank Filled with Non-Corrosive/ Non-Hazardous Liquid
6	( )	( )	( )	Locks on Fill Caps/ Fill Caps Sealed
7	( )	( )	( )	Product Piping Disconnected
8	( )	( )	( )	Power Disconnected
9	( )	( )	( )	Vent Pipe Open
10	( )	( )	( )	Other ____

Diagram (not to scale)



II. Removal

	Yes	No	N/A	
11	(✓)	( )	( )	Valid Closure Permit
12	(✓)	( )	( )	Tank Triple Rinsed
13	(✓)	( )	( )	Manifest Available/Number 8845 1774
14	(✓)	( )	( )	Hazardous Waste Hauler Containerized Chem. Disp
15	(✓)	( )	( )	Destination of Rinsate 400 Gallons to Gibson Refining
16	( )	(✓)	( )	Witnessed Dry-Icing of Tank(s) LEL=0 and ltp received
17	( )	(✓)	( )	Tank Tags Removed U.L. Serial #('s) none found
18	(✓)	( )	( )	Destination of Tank(s) AMR
19	(✓)	( )	( )	Condition of Tank(s) rust & major pitting
20	(✓)	( )	( )	Condition of Excavation clay/dirt mixture w/ some staining
21	(✓)	( )	( )	Soil Staining/Odor slight
22	( )	(✓)	( )	Unauthorized Release form Issued
23	(✓)	( )	( )	Other soil being excavated into lined dumpster - site w/ site mitigation program.

Tox Guards Borings Not Mentioned on This write-up

III. Abandonment In Place

	Yes	No	N/A	
24	( )	( )	( )	Valid Closure Permit
25	( )	( )	( )	Tank(s) Rinsed
26	( )	( )	( )	Manifest Available/Number _____
27	( )	( )	( )	Soil Sampling
28	( )	( )	( )	Tank(s) Filled with Priper Slurry
29	( )	( )	( )	Piping Removed/Capped
30	( )	( )	( )	Vents in Place
31	( )	( )	( )	Indication of Release
32	( )	( )	( )	Notice in Deed
33	( )	( )	( )	Other _____

IV. Soil Sampling

	Yes	No	N/A	
34	(✓)	( )	( )	Number of Samples 6 borings by Middle hauser
35	(✓)	( )	( )	Location of Samples see diagram
36	( )	( )	(✓)	Samples Sealed/COC
37	( )	(✓)	( )	Soil Tests Requested soil test have already been done. Case is w/ site mitigation
38	(✓)	( )	( )	Samples to Certified Lab CRL
39	(✓)	( )	( )	Other Toxguard initiated work but was unable to finish the job (ie. tank pull & site mitigation)

Comments:

(39) Soil sample results ranged from ND to 25,000 mg/kg. Other numbers included 20,000 & 22,000 & ~~20~~ 17,000 mg/kg. Site mitigation was handling the case before this tank was pulled.

(New 2/89)

UNDERGROUND STORAGE TANK
PERMIT FOR CLOSURE
COUNTY OF RIVERSIDE DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SERVICES DIVISION
HAZARDOUS MATERIALS BRANCH

NOTE CHANGE WE RECEIVED LETTER FROM MITTELHAUSER ON MAY 3, 1989 PL.

Type of Permit

Removal [X]

Abandonment in Place [X]

Temporary Closure [ ]

This permit shall not be construed to allow for violation of any law, nor does it prevent further corrections of errors found on the application, plans, and at the site. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this permit, all applicable permits required by the local fire department, building department, and the air quality management district must be obtained and be available for review at the closure site.

All tank closures must, at a minimum, comply with the California Underground Storage Tank Regulations and the appropriate section of the California Health & Safety Codes.

Mittelhauser Corp (Owner/Contractor/Applicant) has applied for and is granted a permit to Remove (Remove/Abandon/Temp. Close) 1 (No.) underground storage tank(s) at Riverside Community Hosp (Facility) located at 4445 Magnolia (Street Address) in Riverside (City/Town); California.

Underground tank closure inspections must be schedule five (5) business days in advance. Telephone (714) 369-1141.

Permit Approved By	Date	Application #
[signature]	2-21-89	89-056

* This Permit for Closure is VALID FOR 90 DAYS from the date of approval. If no reasonable action is taken within that period, the applicant may be required to reapply for a closure permit with all pertinent fees associated.

DOH-HEH-003 (New 3/87)

COUNTY OF RIVERSIDE, DEPARTMENT OF HEALTH

UNDERGROUND STORAGE TANK CLOSURE/ABANDONMENT APPLICATION

Application for closure or abandonment of Underground Storage Tanks. Applicant is to submit four (4) copies of the plans. All fees are NON REFUNDABLE and payable when the plans are submitted with this application.

89-056
PLAN CHECK NUMBER

NAME OF FACILITY	ADDRESS OF FACILITY	PHONE NUMBER
RIVERSIDE COMMUNITY HOSPITAL	4445 MAGNOLIA AVE. RIVERSIDE 92501	(714) 788-3143
NAME OF OWNER	ADDRESS OF OWNER	PHONE NUMBER
SAME AS ABOVE		
NAME OF OPERATOR	ADDRESS OF OPERATOR	PHONE NUMBER
DAVID ADAMS		(714) 788-3143
NAME OF CONTRACTOR/CONTACT PERSON	ADDRESS OF CONTRACTOR	PHONE NUMBER
MITTELHAUSER CORPORATION / BOB STEUHMANN	23272 MILL CREEK DR, STE 300 LAGUNA HILLS 92653	(714) 472-2444
CONTRACTORS LICENSE TYPE & NUMBER		
SUBCONTRACTOR: PRECISION ENGINEERING	LIC. A-527271	

ANSWER THE FOLLOWING QUESTIONS DESCRIBING THE TANKS TO BE CLOSED OR ABANDONED. IF YOU HAVE MORE THAN FOUR (4) TANKS, PROVIDE INFORMATION ON ADDITIONAL APPLICATION FORM.

	TANK 5	TANK 2	TANK 3	TANK 4
SINGLE/DOUBLE WALL TANK	SINGLE		FOUR TANKS	AT SITE
TANK IN USE (YES/NO)	NO		PREVIOUSLY	PERMITTED
IS TANK SUSPECTED OF LEAKING (YES/NO)	YES			
AGE OF TANK (YEARS)	~30 YRS			
CONSTRUCTION MATERIAL OF TANK(S)	STEEL			
HAZARDOUS SUBSTANCE STORAGE HISTORY	DIESEL			

Describe method of tank closure by removal, abandonment or temporary closure. Provide destination and final disposition of tank.

TANK TO BE EXCAVATED AND REMOVED TO AMR IN ONTARIO FOR DISPOSAL.

Dates for which the tanks are to be temporarily closed (if applicable).

Name of person to Contact in an Emergency	(714) 24 Hour Emergency Phone Number
DAVID ADAMS / BOB STEUHMANN	788-3143 / 472-2444

APPLICANT NAME	APPLICANT SIGNATURE	DATE OF APPLICATION
BOB STEUHMANN	Bob Steuhman	2/21/89

PLEASE MAKE YOUR CHECK PAYABLE TO THE COUNTY OF RIVERSIDE

CLOSURE/ABANDONMENT FEE

First Tank $X30XXXX $200.00

Each Additional Tank $X40XXXX $60.00

THIS FORM MUST BE RETURNED WITH YOUR PAYMENT

AMOUNT ATTACHED $ ~~200~~ 60 .00

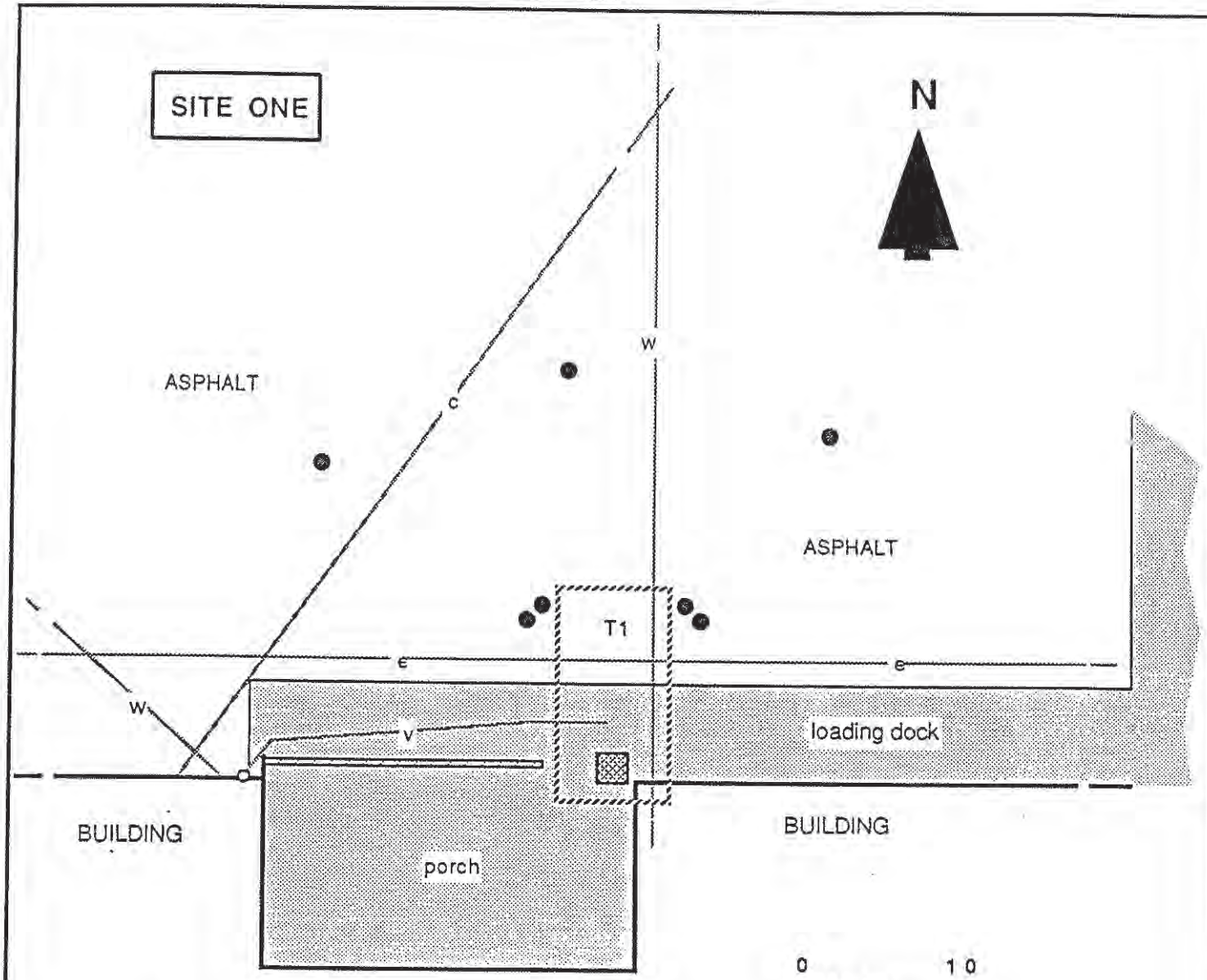
TRANSACTION NO. 1517

DOH-HEH-008 (Rev. 5/87)

BELOW GROUND FACILITIES* AND PROPOSED EXPLORATORY BORING SITES ON A PORTION OF THE RIVERSIDE COMMUNITY HOSPITAL 4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

ENVIRONMENTAL GEOPHYSICAL SURVEYS & UNDERGROUND LOCATION



0 10

ONE INCH EQUALS TEN FEET

EXPLANATION

- Surface Trace of Conduit
- Surface Trace of Subsurface Tank
- Proposed Exploratory Boring Site
- Vault Lid
- Block Wall
- Reinforced Concrete

CONDUITS

- v Vent
- e Electric
- w Water
- c Conduit

TANK DATA

TANK	VOLUME (GALS)	DIMENSIONS (FT)	UPPERMOST LEVEL(FT)	LOWEST LEVEL(FT)
T1	3,000	6.5 X 13	6.5	13.0

88101401E
J. LeTourneau

*Not all below ground facilities may be represented on this map.

UNDERGROUND STORAGE TANK
PERMIT FOR CLOSURE
COUNTY OF RIVERSIDE DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SERVICES DIVISION
HAZARDOUS MATERIALS BRANCH

Type of Permit

Removal [X]

Abandonment in Place [ ]

Temporary Closure [ ]

This permit shall not be construed to allow for violation of any law, nor does it prevent further corrections of errors found on the application, plans, and at the site. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this permit, all applicable permits required by the local fire department, building department, and the air quality management district must be obtained and be available for review at the closure site.

All tank closures must, at a minimum, comply with the California Underground Storage Tank Regulations and the appropriate section of the California Health & Safety Codes.

Geo-Sec has applied for and is granted
Owner/Contractor/Applicant

a permit to Remove 4 underground
Remove/Abandon/Temp. Close No.

storage tank(s) at Riverside Community Hospital located at
Facility

4445 Magnolia Avenue in Riverside, California.
Street Address City/Town

Underground tank closure inspections must be schedule five (5) business days in advance. Telephone (714) 369-1141.

Permit Approved By	Date	Application #
[signature]	12-06-88	88-330

* This Permit for Closure is VALID FOR 90 DAYS from the date of approval. If no reasonable action is taken within that period, the applicant may be required to reapply for a closure permit with all pertinent fees associated.

[illegible] Underground Storage Tanks. Applicant [illegible]
plication for closure or abandonment of Underground Storage Tanks. All fees are NON REFUNDABLE and payable when the plans
umit four copies of the plans.
e submitted with this application.

88 330
PLAN CHECK NUMBER

NAME OF FACILITY Riverside Community Hospital	ADDRESS OF FACILITY 4445 Magnolia, Riverside, CA	PHONE NUMBER 788-3000
NAME OF OWNER Riverside Community Hospital	ADDRESS OF OWNER 4445 Magnolia Riverside, CA	PHONE NUMBER 788-3000
NAME OF OPERATOR Dave Adams	ADDRESS OF OPERATOR Same	PHONE NUMBER 788-3143
NAME OF CONTRACTOR/CONTACT PERSON Fritz Thornburgh, Geo-Sec, Inc.	ADDRESS OF CONTRACTOR 237 So. Waterman Ave., San Bernardino	PHONE NUMBER 885-7072

ANSWER THE FOLLOWING QUESTIONS DESCRIBING THE TANKS TO BE CLOSED OR ABANDONED. IF YOU HAVE MORE THAN FOUR TANKS PROVIDE INFORMATION ON ADDITIONAL APPLICATION FORM.

	TANK 2	TANK 3	TANK 4	TANK 5
SINGLE/DOUBLE WALL TANK	Single	Single	Single	Single
TANK IN USE (YES/NO)	Yes	Yes	Yes	Yes
IS TANK SUSPECTED OF LEAKING (YES/NO)	No	No	No	No
AGE OF TANK (YEARS)	20?	20?	20?	20?
CONSTRUCTION MATERIAL OF TANK(S)	Steel	Steel	Steel	Steel
HAZARDOUS SUBSTANCE STORAGE HISTORY	Diesel	Diesel	Diesel	Diesel
Tank Size	6,000 gal	550 gal	1,000 gal	550 gal

Briefly describe the method of closure/abandonment, removal, or destruction of the tanks
Excavate, remove piping, triple rinse, remove from excavation, sample soil, transport
tanks to an approved facility, backfill & compact excavation.

Dates for which the tanks are to be temporarily closed (if applicable).

Name of Person to Contact in an Emergency Dave Adams		24 Hour Emergency Phone No. 788-3143
APPLICANT NAME (PRINT) Geo-Sec, Inc.	APPLICANT SIGNATURE Fritz Thornburgh	DATE OF APPLICATION 12-6-88

PLEASE MAKE YOUR CHECK PAYABLE TO THE COUNTY OF RIVERSIDE

CLOSURE/ABANDONMENT FEE

First Tank $ ~~130.00~~ 200.00

Each Additional Tank $ ~~40.00~~ 60.00

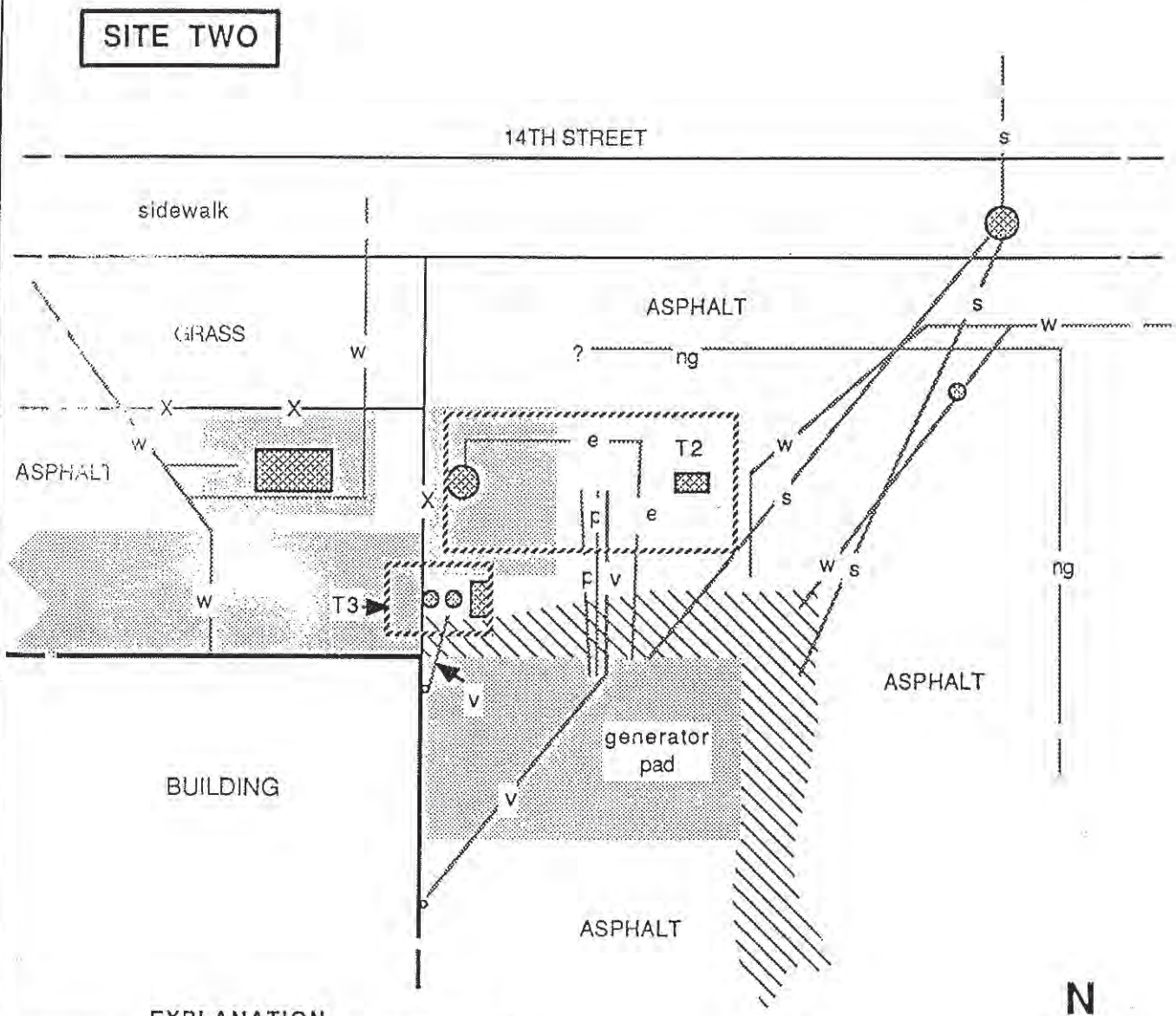
AMOUNT ATTACHED: $ 380 .00

OCR NUMBER: 423

BELOW GROUND FACILITIES* ON A PORTION OF
THE RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

ENVIRONMENTAL GEOPHYSICAL SURVEYS
& UNDERGROUND LOCATION



EXPLANATION

Surface Trace of Conduit	
Surface Trace of Subsurface Tank	
Vault Lid	
Reinforced Concrete	
Excavation	
-X- Chain Link Fence	

CONDUITS	
p	Product
v	Vent
e	Electric
ng	Natural Gas
w	Water
s	Sewer

0 10
ONE INCH EQUALS TEN FEET

N

TANK DATA

TANK	VOLUME (GALS)	DIMENSIONS (FT)	UPPERMOST LEVEL(FT)	LOWEST LEVEL(FT)
T2	6,000	8 X 17	8.4	16.4
T3	550	4 X 6	2.8	6.8

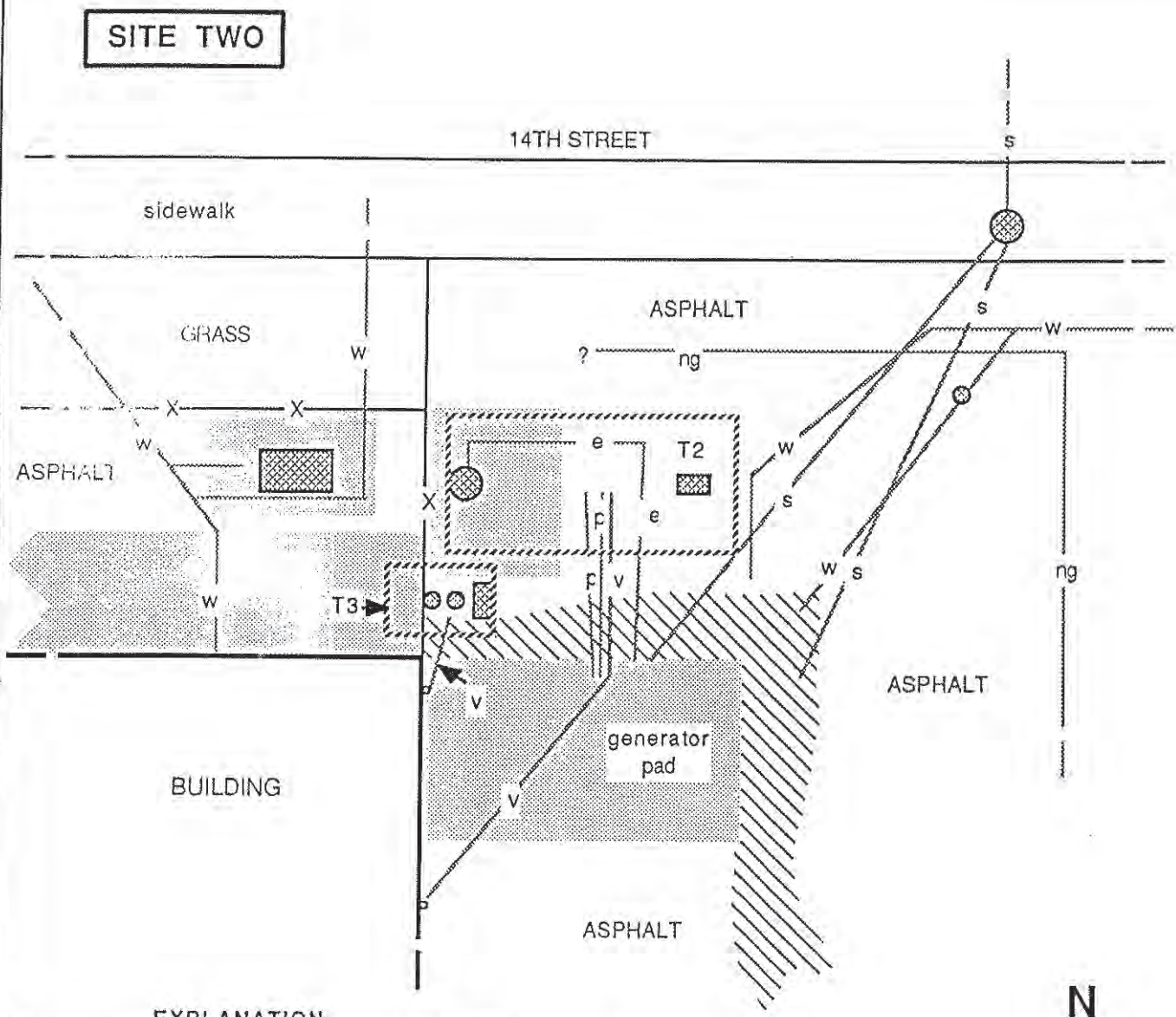
88101401E
J. LeTourneau

*Not all below ground facilities may be represented on this map.

BELOW GROUND FACILITIES* ON A PORTION OF
THE RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

ENVIRONMENTAL GEOPHYSICAL SURVEYS
& UNDERGROUND LOCATION



EXPLANATION

Surface Trace of Conduit	
Surface Trace of Subsurface Tank	
Vault Lid	
Reinforced Concrete	
Excavation	
Chain Link Fence	

CONDUITS	
p	Product
v	Vent
e	Electric
ng	Natural Gas
w	Water
s	Sewer

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TANK DATA

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88101401E
J. LeTourneau

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4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

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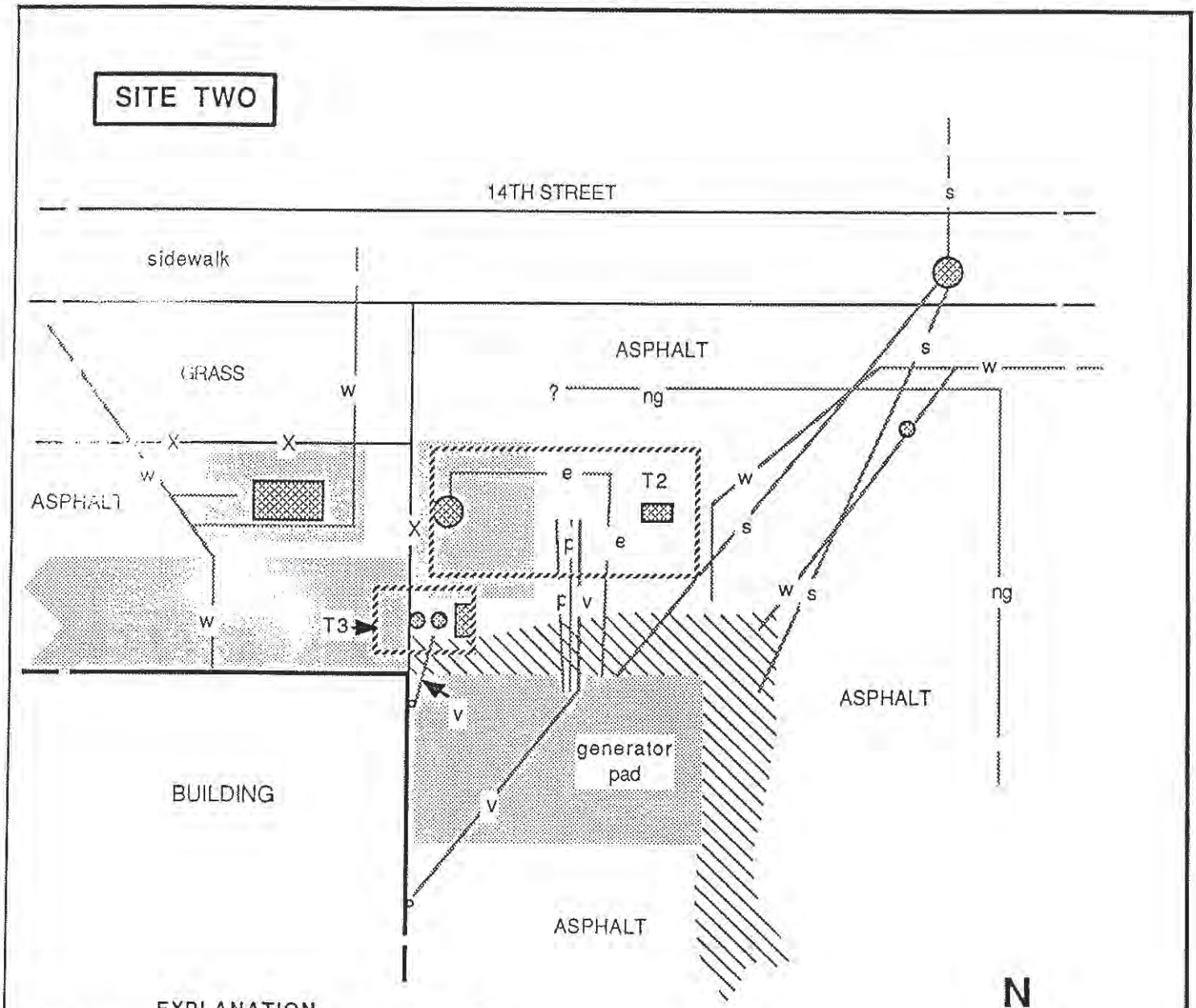
& UNDERGROUND LOCATION



EXPLANATION

Surface Trace of Conduit	
Surface Trace of Subsurface Tank	
Vault Lid	
Reinforced Concrete	
Excavation	
Chain Link Fence	

CONDUITS	
p	Product
v	Vent
e	Electric
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0 10
ONE INCH EQUALS TEN FEET

N

TANK DATA

TANK	VOLUME (GALS)	DIMENSIONS (FT)	UPPERMOST LEVEL(FT)	LOWEST LEVEL(FT)
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88101401E
J. LeTourneau

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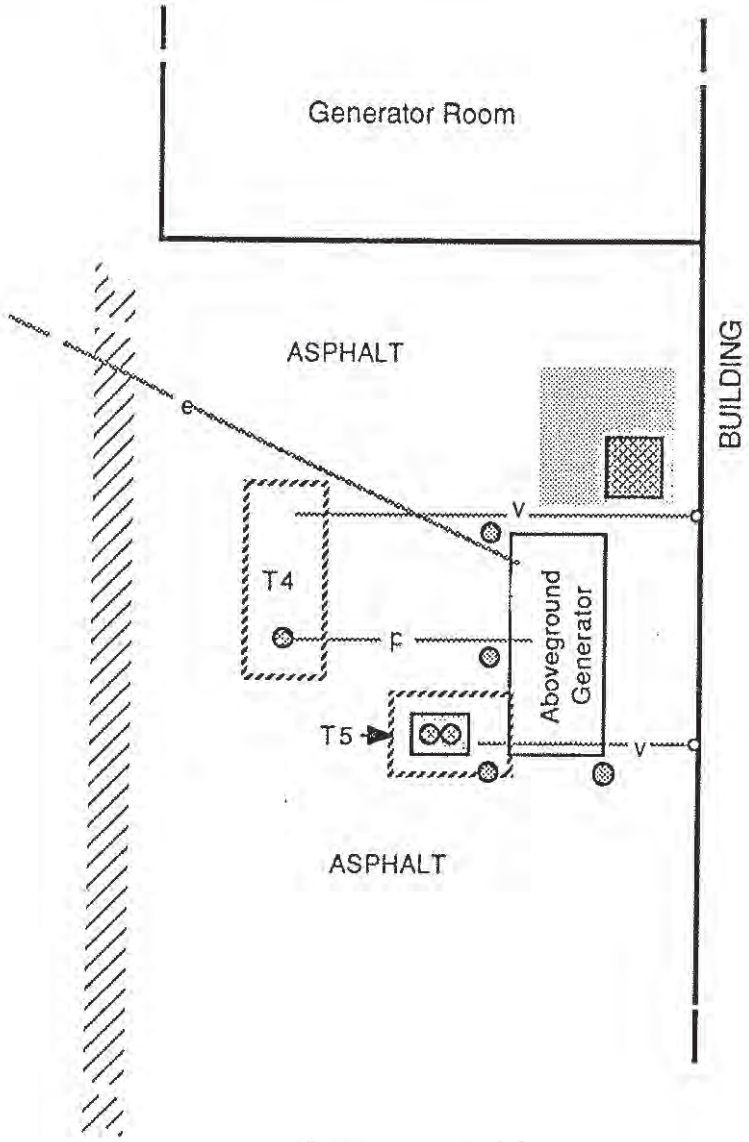
THE RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

ENVIRONMENTAL GEOPHYSICAL SURVEYS
& UNDERGROUND LOCATION



EXPLANATION

Surface Trace of Conduit	
Surface Trace of Subsurface Tank	
Vault Lid	
Reinforced Concrete	
Previous Trench	
Traffic Guard	

CONDUITS

p	Product
v	Vent
e	Electric

TANK DATA

TANK	VOLUME (GALS)	DIMENSIONS (FT)	UPPERMOST LEVEL(FT)	LOWEST LEVEL(FT)
T4	1,000	4 X 11	2.8	6.8
T5	550	4 X 6	2.8	6.8

88101401E
J. LeTourneau

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BELOW GROUND FACILITIES* ON A PORTION OF
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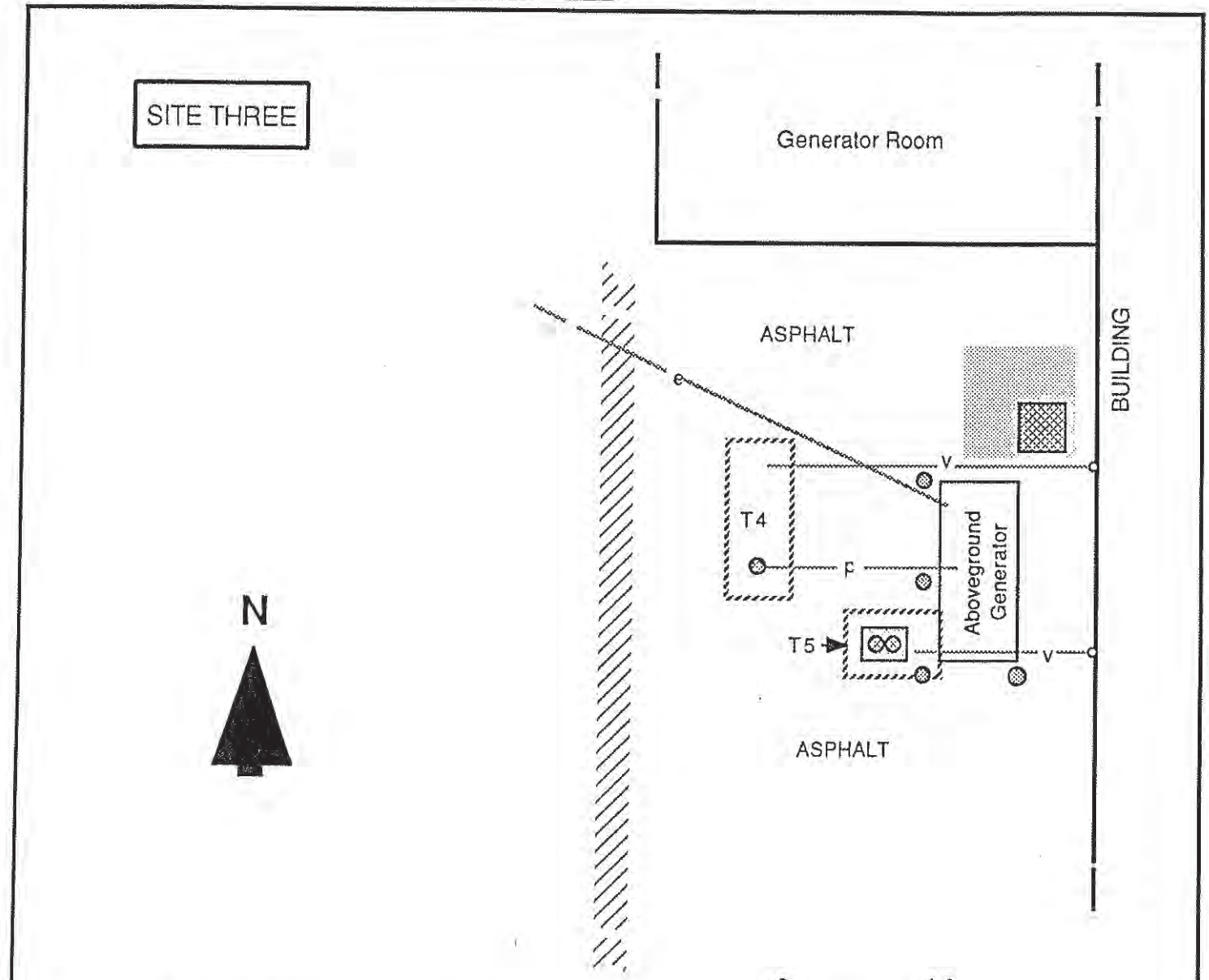
4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

ENVIRONMENTAL GEOPHYSICAL SURVEYS
& UNDERGROUND LOCATION



EXPLANATION

Surface Trace of Conduit	
Surface Trace of Subsurface Tank	
Vault Lid	
Reinforced Concrete	
Previous Trench	
Traffic Guard	

CONDUITS

p	Product
v	Vent
e	Electric

TANK DATA

TANK	VOLUME (GALS)	DIMENSIONS (FT)	UPPERMOST LEVEL(FT)	LOWEST LEVEL(FT)
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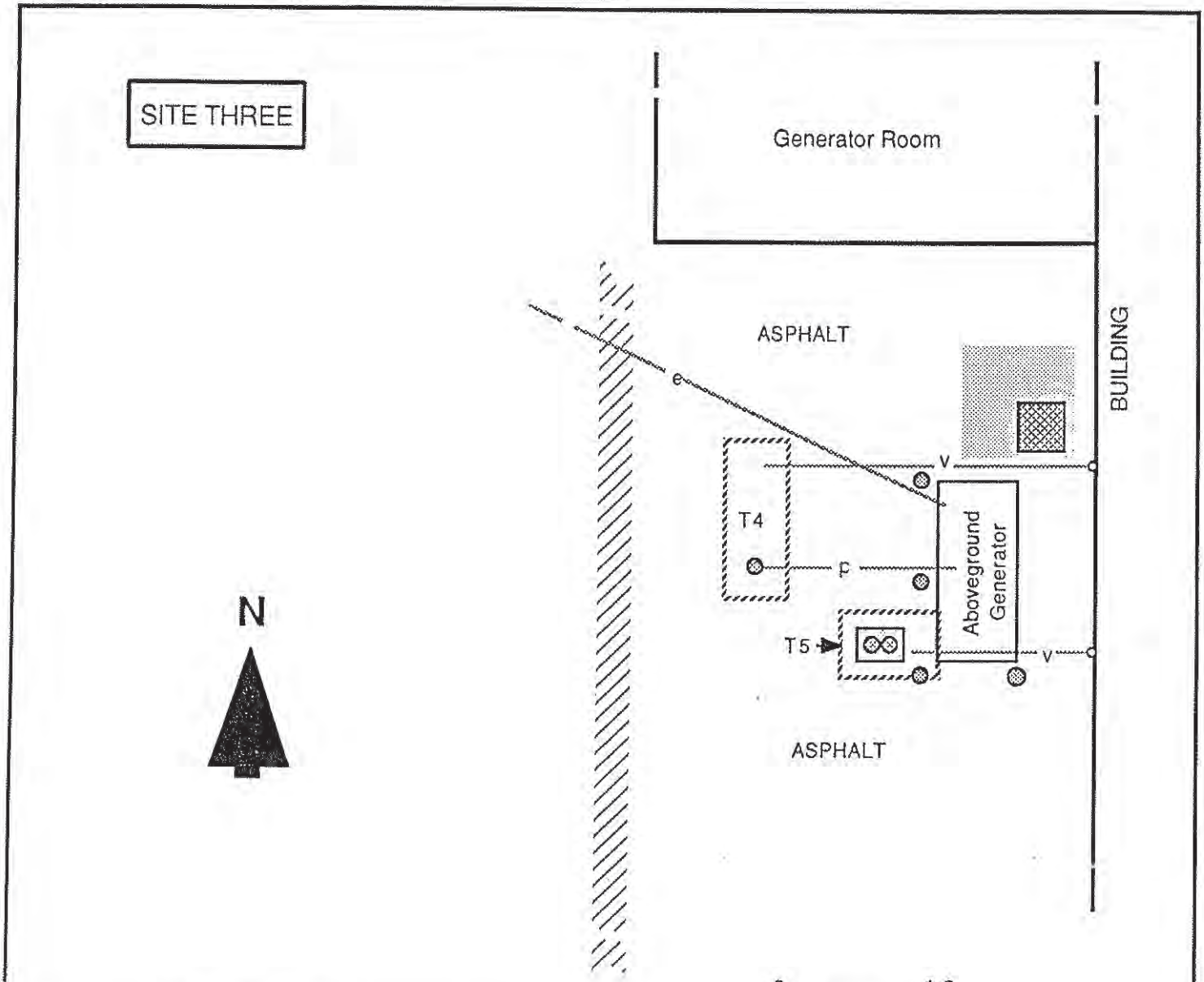
THE RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

ENVIRONMENTAL GEOPHYSICAL SURVEYS
& UNDERGROUND LOCATION



EXPLANATION

Surface Trace of Conduit	
Surface Trace of Subsurface Tank	
Vault Lid	
Reinforced Concrete	
Previous Trench	
Traffic Guard	

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TANK DATA

TANK	VOLUME (GALS)	DIMENSIONS (FT)	UPPERMOST LEVEL(FT)	LOWEST LEVEL(FT)
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88101401E
J. LeTourneau

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COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

Report # 6400

COMPLAINT REPORT

COPY

Received: 9/16/87 Assigned To: **PE: 5520 - Facility Incident** **Complaint #: CO0001787**

COMPLAINT INFORMATION

Area: H01 **District:** H002

Property Name: Riverside Community Hospital

Property Address: 4445 Magnolia Ave

Cross Street: **Phone:** (951) 788-3000

City: Riverside **Zip Code:** 92501

DBA: Riverside Community Hospital

Owner: Riverside Hlthcare System LLC

Phone: (951) 788-3000

COMPLAINT DETAILS

Complaint received thru MAIL **Status: 02-Closed** **Complaint Received by:** Bunchek

Nature of ERCI: Leaking UST ~ 100 gallons (diesel).
Comments: UAR submitted by David C. Adams w/Riverside Community Hospital. Leaking UST discovered on 06/30/87. Tank removed under Plan Check #88-283. No date of removal on report. Tank removed was a 3,000 gallon tank. J. Asbury witnessed removal. The tank had visible holes.
Disposition: See Site Mitigation files.
Type: Soil Only Impacted
Status: Closed/Action Completed

CONTROL No.: 1951
ERCI No.: 87-557

COMPLAINANT INFORMATION

Name: David C Adams **Address:**

Home Phone:

Work Phone: (714) 788-3143 **E-mail:**

Complainant contacted _____

C00001787

COUNTY OF RIVERSIDE - DEPARTMENT OF HEALTH

3575 11th STREET MALL (POST OFFICE BOX 1370) RIVERSIDE, CA 92502

Edward J. Gallagher M.D. M.P.H. Director of Health

HAZARDOUS MATERIALS BRANCH
SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986
(Proposition 65)

NOTIFICATION OF DISCHARGE FORM

I.D.No. 87-557

I. Incident Title Leaking Underground Diesel Fuel Tank

Date Discharge Reported
To Hazardous Materials Branch 9-14-87

Incident Location Riverside Community Hospital 4445 Magnolia Ave Riverside Telephone (714) 788-3143

HEALTH OFFICER NOTIFICATION

II. Date Discharge Report Received SEP 14 1987 Time 1645

by L. K. Lopez
Edward J. Gallagher, M.D., M.P.H.
Director of Health

NOTIFICATION OF BOARD OF SUPERVISORS

III. Date Discharge Report Received 9-18-87 Time 4:25

Margaret Rozano
Signature

Deputy Clerk
Title

NEWS MEDIA NOTIFICATION

IV.

News Media Notified	Date	Time	Contact Person
1. Press Enterprise	9-18-87	5:30 Pm	Juan Aranda
2.			
3.			

Randy Rogers
Signature

Haz Mat Spec II
Title

DOH-HEH-007 (New 4/87)

Reply to:

KJM
950824

COUNTY OF RIVERSIDE - DEPARTMENT OF HEALTH
3575 · 11th STREET MALL (POST OFFICE BOX 1370) · RIVERSIDE, CA. 92502
Edward J. Gallagher, M.D., M.P.H.
Director of Health

HAZARDOUS MATERIALS BRANCH
SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986
DISCHARGE REPORT FORM

I.D.No. 87-557

Date Reported Sept 14, 87 Time 3:00 p.m Date of Discharge unknown
Incident Location/Address 4445 Magnolia Ave Telephone( )
City Riverside Zip 92501
Responsible Party/Address Riverside Community Hospital Telephone (714) 788-3143
Description of Incident Precision tests results indicate tank is not tight. Field inspection during tank removal process revealed hole in side of tank

Substance(s) Discharged/Threatened Discharge Diesel fuel

Quantity unknown
Characteristics of Substance(s) Toxic, Combustible

Extent of Contamination
Soil unknown - tank is still being excavated
Water None
Air - None
Other - None
Health & Safety Threat potential threat to groundwater

Time of Threat ongoing
Health Recommendations Remove tank from ground

Description of Initial Mitigation Measures (evacuation, berming, absorption, containerizing)
Contents of tank removed. Tank in process of being removed

Cleanup Status Pending
Reported By Sandy Bumkhele Date Sept 14, 87
Title Haz. Mat Specialist Distribution: Original - Incident File
1st Copy - Health Officer
2nd Copy - Board of Supv.

DOH-HEH-006 (New 4/87)

Reply to:

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK)/CONTAMINATION SITE REPORT

EMERGENCY [ ] YES [X] NO — HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? [ ] YES [ ] NO

STATE TANK ID #: UNKNOWN

REPORT DATE: 0M 8M 1D 4D 8Y 7Y

LOCAL CASE #:

REGIONAL BOARD CASE #:

US EPA ID #:

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: DAVID C. ADAMS

PHONE: (714) 788-3143

SIGNATURE:

REPRESENTING [ ] LOCAL AGENCY [ ] OTHER [XX] OWNER/OPERATOR [ ] REGIONAL BOARD

COMPANY OR AGENCY NAME: RIVERSIDE COMMUNTIY HOSPITAL

ADDRESS (STREET): 4445 MAGNOLIA AVENUE — CITY: RIVERSIDE — STATE: CALIFORNIA — ZIP: 92501

RESPONSIBLE PARTY

NAME: DAVID C. ADAMS [ ] UNKNOWN

CONTACT PERSON: - SAME -

PHONE: (714) 788-3143

ADDRESS (STREET): - SAME - — CITY — STATE — ZIP

SITE LOCATION

FACILITY NAME (IF APPLICABLE): RIVERSIDE COMMUNITY HOSPITAL

OPERATOR: DAVID C. ADAMS

PHONE: (714) 788-3143

ADDRESS (STREET): - SAME - — CITY — COUNTY — ZIP

CROSS STREET: 14th

TYPE OF AREA: [X] COMMERCIAL [ ] INDUSTRIAL [ ] RESIDENTIAL [ ] RURAL [ ] OTHER

TYPE OF BUSINESS: [ ] RETAIL FUEL STATION [ ] UNKNOWN [X] OTHER HEALTH CARE

IMPLEMENTING AGENCIES

LOCAL AGENCY / AGENCY NAME	CONTACT PERSON	PHONE
		( )
REGIONAL BOARD		( )
TSCD		( )

SUBSTANCES INVOLVED

CAS # (ATTACH EXTRA SHEET IF NEEDED)	NAME	QUANTITY LOST (GALLONS)
(1)	#2 DIESEL	Approx. 100 Gallons [ ] UNKNOWN
(2)		[ ] UNKNOWN

DISCOVERY/ABATEMENT

DATE DISCOVERED: 0M 6M 3D 0D 8Y 7Y

HOW DISCOVERED: [ ] INVENTORY CONTROL [ ] SUBSURFACE MONITORING [ ] ROUTINE MONITORING [ ] TANK REMOVAL [ ] NUISANCE CONDITIONS [X] OTHER: TESTING

DATE DISCHARGE BEGAN: M M D D Y Y [X] UNKNOWN

HAS DISCHARGE BEEN STOPPED? [X] YES [ ] NO IF YES, DATE 0M 6M 3D 0D 8Y 7Y

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY): [X] REMOVE CONTENTS [ ] REPLACE TANK [ ] CLOSE TANK [ ] REPAIR TANK [ ] REPAIR PIPING [ ] CHANGE PROCEDURES [ ] OTHER

SOURCE/CAUSE

SOURCE(S) OF DISCHARGE: [X] TANK LEAK [ ] UNKNOWN [ ] PIPING LEAK [ ] OTHER (SPECIFY)

TANKS ONLY/CAPACITY: GAL — AGE 2 0 YRS. [ ] UNKNOWN — MATERIAL: [X] STEEL [ ] FIBERGLASS [ ] OTHER

CAUSE(S): [ ] OVERFILL [X] CORROSION [ ] RUPTURE/FAILURE [ ] SPILL [ ] UNKNOWN [ ] OTHER

RESOURCES AFFECTED/AT RISK

RESOURCES AFFECTED	YES	NO	THREATENED	UNKNOWN
AIR (VAPOR)	[ ]	[X]	[ ]	[ ]
SOIL (VADOSE ZONE)	[ ]	[ ]	[ ]	[X]
GROUNDWATER	[ ]	[ ]	[ ]	[X]
SURFACE WATER OR STORM DRAIN	[ ]	[ ]	[ ]	[X]
BUILDING OR UTILITY VAULT	[ ]	[ ]	[ ]	[X]
OTHER (SPECIFY)	[ ]	[ ]	[ ]	[ ]

GROUNDWATER BASIN NAME: [X] UNKNOWN

WATER SUPPLIES AFFECTED	YES	NO	THREATENED	UNKNOWN	# OF WELLS
PUBLIC DRINKING WATER	[ ]	[X]	[ ]	[ ]	—
PRIVATE DRINKING WATER	[ ]	[X]	[ ]	[ ]	—
INDUSTRIAL	[ ]	[X]	[ ]	[ ]	—
AGRICULTURAL	[ ]	[X]	[ ]	[ ]	—
OTHER (SPECIFY)	[ ]	[ ]	[ ]	[ ]	—

COMMENTS

COMMENTS:

COMPLETE AND ATTACH A CLEANUP TRACKING REPORT IF ANY CLEANUP WORK OR PLANNING HAS STARTED

COUNTY OF RIVERSIDE
Department of Health, Environmental Health Servic
Hazardous Materials Branch
FIELD LOG

DATE
SHEET 99-

CILITY NAME Riverside Community Hospital PROJECT NUMBER 88-283
DRESS 4445 Magnolia Ave
NTACT PERSON Dennis Z. TELEPHONE 354-9002
RE PERSONNEL Randy Gordon HEALTH PERSONNEL Asbury

A 3000 gallon Tank was uncovered, the tank had visible holes in the sides, also holes near the bung, below around the bottom the tank where some tanks at their joints

Due to a leaking tank the tank is not safe to remove.

Top and bottom of the tank are not be removed.

The tank needs to be removed due to contamination problem

The tank was secured pending an investigation of the soil below and to the sides of the tank

see attach report.

UNDERGROUND STORAGE TANK
PERMIT FOR CLOSURE
COUNTY OF RIVERSIDE DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SERVICES DIVISION
HAZARDOUS MATERIALS BRANCH

Type of Permit

Removal [✓]

Abandonment in Place [ ]

Temporary Closure [ ]

This permit shall not be construed to allow for violation of any law, nor does it prevent further corrections of errors found on the application, plans, and at the site. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this permit, all applicable permits required by the local fire department, building department, and the air quality management district must be obtained and be available for review at the closure site.

All tank closures must, at a minimum, comply with the California Underground Storage Tank Regulations and the appropriate section of the California Health & Safety Codes.

TOX GUARD has applied for and is granted
Owner/Contractor/Applicant

a permit to REMOVE 1 underground
Remove/Abandon/Temp. Close No.

storage tank(s) at RIVERSIDE COMMUNITY HOSPITAL located at
Facility

4445 MAGNOLIA in RIVERSIDE, California.
Street Address City/Town

Underground tank closure inspections must be schedule five (5) business days in advance. Telephone (714) 369-1141.

Permit Approved By: [signature] | Date: 8-26-87 | Application #: 87-283

* This Permit for Closure is VALID FOR 90 DAYS from the date of approval. If no reasonable action is taken within that period, the applicant may be required to reapply for a closure permit with all pertinent fees associated.

COUNTY OF RIVERSIDE, DEPARTMENT OF HEALTH

UNDERGROUND STORAGE TANK CLOSURE/ABANDONMENT APPLICATION

Application for closure or abandonment of Underground Storage Tanks. Applicant is to submit four (4) copies of the plans. All fees are NON REFUNDABLE and payable when the plans are submitted with this application.

87-283
PLAN CHECK NUMBER

NAME OF FACILITY	ADDRESS OF FACILITY	PHONE NUMBER
Riverside Community Hospital	4445 Magnolia, 788-3149	788-3149
NAME OF OWNER	ADDRESS OF OWNER	PHONE NUMBER
NAME OF OPERATOR	ADDRESS OF OPERATOR	PHONE NUMBER
Joe Baird	4445 Magnolia	788-3149 ext. 3150
NAME OF CONTRACTOR/CONTACT PERSON	ADDRESS OF CONTRACTOR	PHONE NUMBER
Toxguard Systems, Inc.	7955 Lugo	884-9002
CONTRACTORS LICENSE TYPE & NUMBER		
A-514481, B-507838		

ANSWER THE FOLLOWING QUESTIONS DESCRIBING THE TANKS TO BE CLOSED OR ABANDONED. IF YOU HAVE MORE THAN FOUR (4) TANKS, PROVIDE INFORMATION ON ADDITIONAL APPLICATION FORM.

	TANK 1	TANK 2	TANK 3	TANK 4
INGLE/DOUBLE WALL TANK	Single			
ANK IN USE (YES/NO)	Yes			
S TANK SUSPECTED OF EAKING (YES/NO)	No			
GE OF TANK (YEARS)	Unknown			
ONSTRUCTION MATERIAL F TANK(S)	Steel			
AZARDOUS SUBSTANCE TORAGE HISTORY	Diesel 3,000			

escribe method of tank closure by removal, abandonment or temporary closure. Provide estination and final disposition of tank.

Removal of tanks by excavation. Tank to be shipped to

AMR, 2202 S. Milliken, Ontario, CA

ites for which the tanks are to be temporarily closed (if applicable).

me of person to Contact in an Emergency	24 Hour Emergency Phone Number

PLICANT NAME	APPLICANT SIGNATURE	DATE OF APPLICATION
Wes Calkins	Wesley B. Calk	8/26/87

PLEASE MAKE YOUR CHECK PAYABLE TO THE COUNTY OF RIVERSIDE

OSURE/ABANDONMENT FEE

rst Tank $130.00

ch Additional

AMOUNT ATTACHED $ 130.00

TRANSACTION NO. 3825

AnaCon Labs
PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408
ATTENTION: Dennis Zafuto

October 26, 1987

LAB NO. 7-09-30-756
PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil # 6

SAMPLE POINT: Riverside Comunity Hospital

FLOW RATE: .....

TIME: Date Received 9/20/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	15,200 mg/Kg

Note: All G.C. Results Performed by Weck Laboratories.

Mike Sanders
ANALYST

Bruce Klingler
LABORATORY DIRECTOR

SW

AnaCon Labs
PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 26, 1987

LAB NO. 7-09-30-752
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample # 2

SAMPLE POINT: Riverside Community Hospit.

FLOW RATE:.....

TIME: Date Received 9/30/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis	
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	19,800	mg/Kg

Additional testing performed 10/16/87 per Dennis Zafuto request for Riverside Environmental Health.

Note: All G.C. Result Performed by Weck Laboratories.

Mike Sanders
ANALYST

Bruce Klingler
LABORATORY DIRECTOR

SW

AnaCon Labs
PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 26, 1987

OCT 29 1987

LAB NO. 7-09-30-754

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil # 4

SAMPLE POINT: Riverside Comunity Hospital

FLOW RATE:.....

TIME: Date Received 9/30/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis	
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	20,500	mg/Kg

Note: All G.C. Results Performed by Weck Laboratories.

Mike Sanders
ANALYST

Bruce Klozler
LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA

AnaCon Labs
PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 13, 1987

OCT. 16 1987

LAB NO. 7-09-30-752
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample H-W- 6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions.

Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Hitchcock
SW ANALYST

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA

AnaCon Labs
PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave,
San Bernardino, CA 92408

October 13, 1987

OCT 16 1987

LAB NO. 7-09-30-755
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample E-2 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Jim Hitchcock
ANALYST

SW

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs
PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 16 1987

October 13, 1987

LAB NO. 7-09-30-756
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample W-6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

Analysis

Nonhalogenated Volatile Organics
EPA Method 8015

None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tina Hitchcock
ANALYST

LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs
PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone (714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 13, 1987

OCT. 16 1987

LAB NO. 7-09-30-753

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample N-W-2 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

---

	Analysis
Nonhalogenated Volatile Organics	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Jim Hitchcock
ANALYST

SW

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs
PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 13, 1987

OCT. 16 1987

LAB NO. 7-09-30-756
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample W-2 Ft

SAMPLE POINT: Riverside Community Hospita
4445 Magnolia Ave.

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Hitchcock
ANALYST

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs
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24 HOUR SERVICE
713 North Main Street
Riverside, California 92501
Telephone (714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 16 1987

October 13, 1987

LAB NO. 7-09-30-754

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample E-6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

---

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Hitchcock
ANALYST

SW

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

HA0014577/HM80064

COUNTY OF RIVERSIDE - DEPARTMENT OF HEALTH
3575 · 11th STREET MALL (POST OFFICE BOX 1370) · RIVERSIDE, CA. 92502
Edward J. Gallagher, M.D., M.P.H.
Director of Health

August 10, 1987

Mr. Joe Bain, Maintenance
Riverside Communtiy Hospital
4445 Magnolia Ave.
Riverside, CA 92501

RE: Leaking Underground Storage Tank (6,000 gal.) at 4445 Magnolia

Dear Mr. Bain;

As a result of your statements that visible leaks can be seen at your tank, I have enclosed a Release (Leak)/Contamination Site Report. Complete the U.S.T. Unauthorized Leak Report and return all five (5) copies to this agency plus a full written report of your tank release within five (5) working days upon receipt of this letter (see enclosed Reportable Release Requirements).

Also, I have enclosed a tank closure application if it is your intention to close this tank by removal.

Be advised, that if your fueling tank system continues to operate, the owner/operator of this facility is legally responsible for any soil contamination cleanup costs that may result from this leaking tank.

Feel free to call this office at (714) 369-1141 if you have any questions regarding the above correspondence or enclosed forms.

Sincerely,

Sandy Bunchek

Sandy Bunchek
Hazardous Materials Specialist
SB:lg

Reply to:

RIVERSIDE HEALTH SERVICES AGENCY
DEPARTMENT of ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS MANAGEMENT DIVISION
UNDERGROUND STORAGE TANK MONITORING ALTERNATIVE APPLICATION

Facility Name RIVERSIDE COMMUNITY HOSPITAL Facility Address 4445 MAGNOLIA AVE.

Facility Owner RIVERSIDE COMMUNITY HOSPITAL Facility Owner Address 4445 MAGNOLIA AVE.

Operator Name RIVERSIDE COMMUNITY HOSPITAL Operator Address 4445 MAGNOLIA AVE.

Contact Person's Name EARL HUCKINS Contact Person's Phone # (909) 788-3149

	Tank 1	Tank 2	Tank 3	Tank 4
1. Date of Tank Installation 3/15/89	1989	1989		
2. Tank Size (Capacity)	5,000	5,000		
3. Materials used in the construction of the tank - please specify: Steel (S), Fiberglass (F), Plasteel (P), Other (O)	F	F		
4. Materials stored in the tank, past and present - please specify: Motor Vehicle Fuel (MVF), Diesel (D), Waste Oil (W), Other (O)	D	D		
5. What type of corrosion protection does the tank have? Cathodic (C), Other (O), None (N)	R	R		
6. Has primary tank been repaired? Yes (Y) Date_____, No (N)	N	N		
7. Are tanks located in the same or closely spaced excavation? Yes (Y), No (N), Not applicable (NA)	Y	Y		
8. Type of secondary containment for the tank? - please specify: External non-coating liner (L), Double-walled construction (DW), None (N), Other (O).	DW	DW		
9. Materials used in the construction of piping - please specify: Fiberglass (F), Steel/Iron (S), Other (O).	S	S		
10. Type of secondary containment for the piping - please specify: Fiberglass (F), External non-coating liner (L), Other (O), None (N).	F	F		
11. Is product piping: pressurized (P) suction (S) or gravity (G)?	S	S		
12. What is the highest anticipated groundwater? Specify information source:	?	?		
13. Date of last monitoring equipment certification? Type of monitoring equipment currently installed? PETROSONIC III (8/29/92)	X	X		
14. Date of the last tank/product line precision test ? Test company JULY 5, 1991 PACKHAM & TOOMEY CO.				
15. Indicate choice of monitoring alternatives from Tables A and B for **EXISTING** tanks & piping or alternatives from Table C for **NEW** Double-walled tank systems.	13	13		

Applicant's Name (Print)	Applicant's Title	Applicant's Signature	Application Date
EARL HUCKINS	DIRECTOR OF ENGINEERING	Earl Huckins	6/16/98

Revised 5/17/95

COUNTY OF RIVERSIDE • HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

November 25, 1998

Riverside Community Hospital
4445 Magnolia Ave.
Riverside, CA 92501

Enclosed please find the California Underground Storage Tank Upgrade Compliance Certificate, decal, tank tags and straps for the following facility:

Certificate #18656	4445 Magnolia Ave., Riverside	2 tanks

Authorized Representative Signature

Title

DIRECTOR OF ENGINEERING

Date 12-11-98

John M. Fanning, Director
4065 County Circle Drive • Riverside, CA 92503 • Phone (909) 358-5316 • FAX (909) 358-5017
(Mailing Address - P.O. Box 7600 • Riverside, CA 92513-7600)

printed on recycled paper

County of Riverside

Department of Environmental Health

Hazardous Materials Management Division

1998 Compliance Review Worksheet

Facility # 80649	Date: 2-13-98
Facility Name: RIVERSIDE COMMUNITY Hospital	
Facility Address: 4445 MAGNOLIA., RIVERSIDE	

Check all boxes below that apply to make the determination for 1998 upgrade compliance.

TANK

( ) Single Wall
- ( ) Fiberglass
- ( ) Interior Lined with Cathodic Protection
- ( ) Steel - Needs Upgrade for 1998

(X) Double Wall
( ) Striker Plate Installed
( ) Striker Plate Not Installed or Unknown - Needs Upgrade for 1998

Tank Manufacturer: Ace Boehler
Date Manufactured: _____
Number of Tanks: 1
Date Installed: 1989

SPILL

(X) 5 Gallon Spill Bucket With Drain Installed
( ) 5 Gallon Spill Bucket Not Installed - Needs Upgrade for 1998

OVERFILL

( ) Fill Riser Valve Installed *(Drop Tube With Flapper Valve)*
( ) Ball Float Vent Valve Installed
( ) Electronic Overfill Alarm Installed
( ) NeedsUpgrade for 1998

PIPING

( ) Single Wall
- ( ) Fiberglass
- ( ) Steel with Cathodic Protection
- ( ) Steel - Needs Upgrade for 1998

(X) Double Wall

CORROSION PROTECTION

Turbine Area
- ( ) Turbine Head with Monitored Sump
- ( ) Turbine Head with Cathodic Protection
- ( ) Turbine Head in Contact with Backfill/Water - Needs 1998 Upgrade

Dispenser Area
- ( ) Flex/Steel Line with Isolation Boot
- ( ) Flex/Steel Line with Cathodic Protection
- ( ) Flex/Steel Line in Contact with Backfill/Water - Needs 1998 Upgrade

CONTINUOUS MONITORING SYSTEM ON PIPING SYSTEM

( ) In Line Leak Detector Installed on Single Wall Product Line with Positive Shut Down
( ) In Line Leak Detector Not Installed on Single Wall Product Line with Positive Shut Down - Needs 1998 Upgrade

☒ **Facility Meets 1998 Upgrade Requirements**

☐ **Requires Site Visit to Varify 1998 Upgrade Requirements**
☐ **Facility Does Not Meet 1998 Upgrade Requirements**

COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Riverside Hlthcare System LLC
DBA: Riverside Community Hospital
Mailing Address: Jose Torres/Dir Engineering
4445 Magnolia Ave
Riverside, CA 92501

EPA ID: CAL000006160
Facility #: FA0014577
Permit Expiration Date: 09/30/2013
Area Number: H01
District Number: HD02

Site Address: 4445 Magnolia Ave
Riverside, CA 92501

Regulated Activity: PR0015684 5203 - 501 or more Generator
Regulated Activity: PR0024695 5300 - Underground Storage Tanks

Tank BOE # 44018391

Monitoring or programming for monitoring will be conducted at the locations of the following equipment, if installed: monitoring system control panels, sensors monitoring tank annular spaces, sumps, dispenser pans, spill containers, or other secondary containment areas (e.g. double-walled piping); mechanical or electronic line leak detectors; and in-tank liquid level probes (if used for leak detection). Also monitoring options for automatic pump shutdown, fail safe operation, or other programming options will be specified.

TANK DETAILS

Tank ID	Tank Volume	Material Stored
TA0001108	5,000	DIESEL
TA0001109	10,000	DIESEL

Regulated Activity: PR0027245 5171 - Haz Mat Usage Review II (V)

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances and regulations that are now or may hereafter be in force by the United States Government, the State of California, and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above listed programs. **This permit must be renewed on or before the expiration date shown above.** This permit may be suspended or revoked by the enforcement officer for cause. **Inspection of this business may be conducted by a duly authorized representative of the Director of Environmental Health. THIS PERMIT IS NOT TRANSFERABLE OR REFUNDABLE.**

Western County Office	Corona Office	Desert County Office	South County Office
4065 County Circle Dr.	2275 S. Main Street #204	47950 Arabia Street, Suite A	800 S. Sanderson
Riverside, CA 92503	Corona, CA 92882	Indio, CA 92201	Hemet, CA 92545
(951) 358-5055	(951) 273-9143	(760) 863-8976	(951) 766-6524

POST IN A CONSPICUOUS PLACE

COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

Report # 6400

COPY

COMPLAINT REPORT

Received: 7/24/95 | Assigned To: Placeholder | **Complaint #: CO0010325**

PE: 5520 - Facility Incident

COMPLAINT INFORMATION

Area: H01 **District:** H002

Property Name: Riverside Community Hospital

Property Address: 4445 Magnolia Ave

Cross Street: **Phone:** (951) 788-3000

City: Riverside **Zip Code:** 92501

DBA: Riverside Community Hospital

Owner: Riverside Hlthcare System LLC

Phone: (951) 788-3000

COMPLAINT DETAILS

Complaint received thru **Status: 02-Closed** **Complaint Received by:** Placeholder

M. Brown, HMMS III, assigned to complaint.
Nature of ERCI: Illegal storage of 5 lb bag of 5% diazinon granules found in ER storage closet.
Disposition: Advised RP to spread it out over the lawn to control chinch bugs, ants and grubs.

No further action will be taken.
CASE CLOSED

CONTROL No.: 10459
ERCI No.: 95-613

COMPLAINANT INFORMATION

Name: Perris ECC **Address:**

Home Phone:

Work Phone: **E-mail:**

Complainant contacted _____

C00010325

COUNTY OF RIVERSIDE HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS MANAGEMENT BRANCH

No. 95-613

Page 1 of 2 pages

EMERGENCY RESPONSE, COMPLAINT, INVESTIGATION

Date July 24, 1995

Time 0042 HRS a.m. ✓ p.m. ____

STATE P.O. # ____

TOTAL TIME SPENT ON INCIDENT 1 Hours/Min.

SUBJECT: Emergency Response ✓ HMS
Waste Generators ____
Underground Storage Tanks ____
Response Plans/Inventory ____
Other ____

SPECIALIST ASSIGNED: BROWN

PRELIMINARY COMPLAINT REVIEWED BY: ____

AGAINST OR ABOUT:

Name RIVERSIDE COMMUNITY HOSP.

Telephone ( ) ____

Address ____

City RIVERSIDE

Nearest Cross Street MAG. + 14TH

PERSON REPORTING:

Name PERRIS ECC

Telephone ( ) ____

Address ____

City ____

SUBJECT DESCRIPTION (including material, type, amount, location):

ABANDONED 5# BAG ON 5% DIAZINON

COMPLAINT RECEIVED BY (CLERK/SPECIALIST) ____

OTHER AGENCIES NOTIFIED: ____

DISPOSITION OF CASE:

Date 7/24/95

SEE ATTACHED

ENTERED
950919 JM
JM 970403

DEH-HEH-001 (Rev11/92)

DISTRIBUTION: ORIGINAL-Specialist; COPY-Supervisor

DATE: Monday July 24, 1995

TIME: ~~0723 HR~~ 0042 HRS

LOCATION: Riverside Community Medical Center

HAZ MAT 1: Did Not Respond

HEALTH: Brown

RE: One five pound bag of 5% Diazinon granules abandoned in emergency room storage closet

On July 24, 1995 at 0042 hrs, the Riverside County Health Haz Mat was paged regarding the above referenced incident. Haz Mat Specialist Marc Brown called Riverside City Police/Fire Dispatch. Dispatch told Brown to contact the ER of Riverside Community Medical Center. There had been a five pound bag of diazinon granules left in a storage closet in the ER. Brown spoke with City Haz Mat Capt. Odel and told him to spread it out over the lawn to control chinch bugs, ants and grubs.

No further action will be taken. Case Closed

Marc K. Brown
Hazardous Materials
Management Specialist III

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health Hazardous Materials Management Division
Underground Storage Tank Inspection Report — Double Walled System

Facility Name: Riverside Community Hospital Date: July 18, 2011

Address: 4445 Magnolia Ave Inspection: Routine [ ] Reinspection [✓]

City: Riverside Zip Code: 92501 Facility #: FA0014577 14577

Contact Person: _____ Phone No.: _____ ICC Certified Tech Present: Yes [✓] No [ ]

Refer to Title 23 of California Code of Regulations (CCR), Chapter 6.7 of the California Health and Safety Code (CHSC). Items marked "N" are violations of the Underground Storage Tank laws and regulations and must be corrected in the inspection report. N/A is not applicable or unable to verify.

			Tank ID: Diesel			Tank ID			Tank ID			Tank ID		
			Size			Size			Size			Size		
ITEM NO.	UST SYSTEM RECORDS	CODE SECTIONS	Y	N	N/A	Y	N	N/A	Y	N	N/A	Y	N	N/A
301	UPC Form A and B current	2711(c), 25286(a), 2712(i)	✓											
302	Financial Responsibility current	25292.2(a), 2712(i)	✓											
303	Owner/Operator Agreement submitted	2620(b), 25284(a)(3), 2712(i)			✓									
304	Monitoring Plan approved	2632(b), 2712(i)	✓											
305	Unauthorized Release Response Plan current	2632(c)(2)(D)(2), 2712(i)	✓											
306	Permits current and retained at facility	2712(i), 25284(a)	✓											
307	Continuous monitoring system certified annually/Annual spill container test	2630(d), 2638, 25284.2	✓											
308	Secondary containment tested as required x 7/18/2011	2637, 25284(a)(4)(B)	✓											
309	Releases reported/recorded	2650(b), 2651, 2652	✓											
310	Maintenance and monitoring records available	2712(b)	✓											
311	Owner Statement/Designated Operator/Monthly Inspections/Training	2715(a)-(f)	✓											
	UST SYSTEM INSPECTION													
312	Alarm status is normal/Alarm history available	2638(a), 25293	✓											
313	Audible and visual alams are functioning properly	2632(c)(2)(B), 2636(f)(1)	✓											
314	Sticker/tag affixed to monitoring equipment at certification	2638(f)	✓											
315	UST system has approved overfill protection	2635(b)(2)	✓											
316	Spill container in good condition and liquid free.	2635(b)(1)	✓											
317	Spill container drain appears functional or alternative available.	2635(b)(1)(C)	✓											
318	All containment sumps clean/liquid free/good condition.	2631(e)(4), 25291(e)	✓											
319	Secondary containment system drained to monitored sump	2636(c)(1), 2636(f)	✓											
320	Sensors placed at low point in all sumps	2630(d), 25299(a)(9)	✓											
321	Under dispenser containment monitored	2636(f), 2636(g)(2)			✓									
322	Contractor/CMD Technician trained/ICC Certified	2638(b), 2715(i)	✓											
	MONITORING OPTIONS FOR PRESSURIZED SYSTEMS													
	OPTION 1													
323	UDC - Shut down the turbine or stops flow of product at dispenser	2636(f)(5)(A)												
324	PPS - Shut down the turbine when a leak is detected and fail-safe	2636(f)(5)(B)												
325	Line leak detector detects 3.0 gph or equivalent and is certified annually	2636(f)(2), 2638(a)												
	OPTION 2													
326	UDC & PPS - Audible and visual alarm or stops flow of product at dispenser	2636(f)(1)												
327	Line leak detector detects 3.0 gph or equivalent and is certified annually	2636(f)(2), 2638(a)												
328	Annual pipeline integrity test detects .1 gph at 150% of operating pressure	2636(f)(4)												
	OPTION 3 - EMERGENCY GENERATORS WITH PRESSURIZED PIPING													
329	PPS - Audible and visual alarm	2636(f)(1)												
330	Monitoring system checked daily and logged	2636(f)(6)												
331	Annual pipeline integrity test detects .1 gph at 150% of operating pressure	2636(f)(4)												
	OPTION 4 - VACCUM/PRESSURE/HYDROSTATIC (VPH) SYSTEMS													
332	VPH System is operational/alarm status normal	25290.1(d), 25290.1(e)												
333	Continuous audible and visual alarm	25290.1(d), 25290.1(e)												
334	Line leak detector detects 3.0 gph or equivalent and is certified annually	25290.1(h), 2638(a)												
	OPTION 5 - DOUBLE WALL SUCTION, GRAVITY, REMOTE													
335	Continuous audible and visual alarm or stops flow of product at dispenser	2636(f)(1)	✓											

Previous inspection documented corrective required for the following:
Item 303 - SB989 testing could not be completed due to test port failure which required replacement. Equipment replacement verified and all items retested and passed. SB989 testing done 7/18/2011. Report to be submitted at a later date.
Report emailed to Mr. Torres - Riverside Community Hospital

☐ **NOTICE OF VIOLATION:** The violations noted above must be corrected within ( ) days. Failure to comply may result in legal action.

Specialist: R Gerwe Received by: _____ Title: _____

Riverside Office (951) 358-5055, P.O. Box 7600, Riverside, CA 92513-7600
Indio Office (760) 863-8976, 47-950 Arabia Street, Ste. A, Indio, CA 92201
Hemet Office (951) 766-6524, 800 S. Sanderson Avenue, Ste. 102, Hemet, CA 92545
Corona Office (951) 273-9143, 2275 S. Main Street, Ste. 204, Corona, CA 92882

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health Hazardous Materials Management Division
Underground Storage Tank Inspection Report — Double Walled System

Facility Name: Riverside Community Hospital Date: March 22, 2012

Address: 4445 Magnolia Ave Inspection: Routine [✓] Reinspection [ ]

City: Riverside Zip Code: 92501 Facility #: FA0014577

Contact Person: Jose Torres Phone No.: ICC Certified Tech Present: Yes [✓] No [ ]

Refer to Title 23 of California Code of Regulations (CCR), Chapter 6.7 of the California Health and Safety Code (CHSC). Items marked "N" are violations of the Underground Storage Tank laws and regulations and must be corrected in the inspection report. N/A is not applicable or unable to verify.

			Tank ID: Diesel			Tank ID: Diesel			Tank ID			Tank ID		
			Size: 10K			Size: 5K			Size			Size		
ITEM NO.	UST SYSTEM RECORDS	CODE SECTIONS	Y	N	N/A	Y	N	N/A	Y	N	N/A	Y	N	N/A
301	UPC Form A and B current 441-018391	2711(c), 25286(a), 2712(i)	✓			✓								
302	Financial Responsibility current	25292.2(a), 2712(i)	✓			✓								
303	Owner/Operator Agreement submitted	2620(b), 25284(a)(3), 2712(i)			✓			✓						
304	Monitoring Plan approved	2632(b), 2712(i)	✓			✓								
305	Unauthorized Release Response Plan current	2632(c)(2)(D)(2), 2712(i)	✓			✓								
306	Permits current and retained at facility	2712(i), 25284(a)	✓			✓								
307	Continuous monitoring system certified annually/Annual spill container test	2630(d), 2638, 25284.2	✓			✓								
308	Secondary containment tested as required July 2011	2637, 25284(a)(4)(B)	✓			✓								
309	Releases reported/recorded	2650(b), 2651, 2652	✓			✓								
310	Maintenance and monitoring records available	2712(b)	✓			✓								
311	Owner Statement/Designated Operator/Monthly Inspections/Training	2715(a)-(f)	✓			✓								
	UST SYSTEM INSPECTION													
312	Alarm status is normal/Alarm history available	2638(a), 25293	✓			✓								
313	Audible and visual alarms are functioning properly	2632(c)(2)(B), 2636(f)(1)	✓			✓								
314	Sticker/tag affixed to monitoring equipment at certification	2638(f)	✓			✓								
315	UST system has approved overfill protection	2635(b)(2)	✓			✓								
316	Spill container in good condition and liquid free.	2635(b)(1)	✓			✓		✓						
317	Spill container drain appears functional or alternative available.	2635(b)(1)(C)	✓			✓								
318	All containment sumps clean/liquid free/good condition.	2631(e)(4), 25291(e)	✓			✓								
319	Secondary containment system drained to monitored sump	2636(c)(1), 2636(f)	✓			✓								
320	Sensors placed at low point in all sumps	2630(d), 25299(a)(9)	✓			✓								
321	Under dispenser containment monitored	2636(f), 2636(g)(2)			✓			✓						
322	Contractor/CMD Technician trained/ICC Certified	2638(b), 2715(i)	✓			✓								
	MONITORING OPTIONS FOR PRESSURIZED SYSTEMS													
	OPTION 1													
323	UDC - Shut down the turbine or stops flow of product at dispenser	2636(f)(5)(A)			✓			✓						
324	PPS - Shut down the turbine when a leak is detected and fail-safe	2636(f)(5)(B)			✓			✓						
325	Line leak detector detects 3.0 gph or equivalent and is certified annually	2636(f)(2), 2638(a)			✓			✓						
	OPTION 2													
326	UDC & PPS - Audible and visual alarm or stops flow of product at dispenser	2636(f)(1)			✓			✓						
327	Line leak detector detects 3.0 gph or equivalent and is certified annually	2636(f)(2), 2638(a)			✓			✓						
328	Annual pipeline integrity test detects .1 gph at 150% of operating pressure	2636(f)(4)			✓			✓						
	OPTION 3 - EMERGENCY GENERATORS WITH PRESSURIZED PIPING													
329	PPS - Audible and visual alarm	2636(f)(1)			✓			✓						
330	Monitoring system checked daily and logged	2636(f)(6)			✓			✓						
331	Annual pipeline integrity test detects .1 gph at 150% of operating pressure	2636(f)(4)			✓			✓						
	OPTION 4 - VACCUM/PRESSURE/HYDROSTATIC (VPH) SYSTEMS													
332	VPH System is operational/alarm status normal	25290.1(d), 25290.1(e)			✓			✓						
333	Continuous audible and visual alarm	25290.1(d), 25290.1(e)			✓			✓						
334	Line leak detector detects 3.0 gph or equivalent and is certified annually	25290.1(h), 2638(a)			✓			✓						
	OPTION 5 - DOUBLE WALL SUCTION, GRAVITY, REMOTE													
335	Continuous audible and visual alarm or stops flow of product at dispenser	2636(f)(1)	✓			✓								

See Supplemental Report

☐ **NOTICE OF VIOLATION:** The violations noted above must be corrected within ( ) days. Failure to comply may result in legal action.

Specialist: Richard Guerrero Received by: Title

Riverside Office (951) 358-5055
P.O. Box 7600
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Hemet, CA 92545

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2275 S. Main Street, Ste. 204
Corona, CA 92882

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

SUPPLEMENTAL REPORT

Reference Date March 22, 2012

Name Riverside Community Hospital

Address 4445 Magnolia Ave Riverside 92507

Re: Underground Storage Tank Inspection Facility # FA0014577

Remarks:

Underground Storage Tank annual inspection and monitoring system certification on March 22, 2012

Inspection notes:

- Sensor at low points
- Spill containers in good condition
- UST records on file
- Approved overfill protection

No Violations

* Copy of report sent to Riverside Community Hospital

Specialist R. Gerow Received By *

DEH-HEH-002 (rev 5/02) HMHC 2002 white-specialist; yellow-operator; pink-file

SR0022799

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

Facility # FA0011597

UNDERGROUND STORAGE TANK INSTALLATION/UPGRADE/MODIFICATION/REPAIR INSPECTION

Name/DBA: RIVERSIDE COMMUNITY HOSPITAL	Plan Check #: 11-062
Address: 4445 MAGNOLIA AVE	City: RIVERSIDE
Contractor Name: CALIF. HAZARDOUS SERVIC	Contractors State License Board #: 734854
	Phone: (714) 434-9995
Type of Work Completed: Installation / Upgrade / Modification / X Repair / Other	Type of USTs (Attach Photos):
	Number of USTs: 2 - EXISTING

	Y	N	n/a
1. SETTING OF UST(S)			
a. Approved plans on site	/		
b. Primary and secondary tank pneumatically tested as per manufacturer's specifications			/
c. UST(s) arrived on site with vacuum intact if required			/
d. Approved backfill material used			/
e. Filter fabric used if required			/
f. Distance between UST(s) per manufacturer's specifications			/
g. UST(s) marked with UL stamp			/
2. PRIMARY INSPECTION			
a. Required forms issued*			/
b. All piping sloped back to UST/Piping marked with UL stamp			/
c. All primary piping tested pneumatically at 110% of designed operating pressure for a minimum of 30 minutes			/
d. Vent and vapor piping tested as per manufacturer's specifications			/
e. All joints soaped and checked			/
f. Distance between piping per manufacturer's specifications			/
g. All connections to stationary objects consist of approved flexible connectors			/
h. Vapor recovery piping sloped back to lowest octane UST			/
i. Soil samples witnessed if required			/
j. ELD workplan submitted if required			/
3. SECONDARY INSPECTION			
a. Approved secondary containment in place to grade			/
b. Secondary piping system tested per manufacturer's specifications (5 psi) for a minimum of 30 minutes			/
c. All joints soaped and checked			/
d. No exposed steel			/
e. Impact valves present and secured			/
f. All sumps hydrostatically tested for 30 min. above the highest penetration (turbine, fill, spill container and UDC)	/		

	Y	N	n/a
4. FINAL INSPECTION			
a. Operational sensors in annular(s) and sump(s)/ Positive shut-down demonstrated if required			/
b. Electronic monitor secured/ accessible to operator and operational			/
c. All sensors will detect earliest possible release	/		
d. Operational leak detectors on turbine(s)			/
e. Fill pipes and monitoring well(s) labeled			/
f. Operational spill container(s) in place at fill(s)			/
g. Overfill prevention valve or overfill alarm and ball float vent/valve in place (test overfill alarm)			/
h. Concrete slopes away from all UST manways			/
i. Impact valve chains set and operational			/
j. Emergency shut-off switch operational			/
k. All monitoring equipment components have tag/sticker affixed by Licensed Technician			/
l. Containment drains into a monitored sump (i.e. boots pulled back, drain valves open, etc.)			/
*m. Unauthorized release response plan submitted			/
*n. Valid Test of Tank System submitted if required			/
*o. Continuous Monitoring Device Certification submitted (include leak detector test if required)			/
*p. Pipeline Integrity Test submitted if required			/
*q. Unified Program Consolidated Forms A, B and C submitted as required			/
*r. Financial Responsibility statement submitted			/
s. Monitoring Option form completed			/
t. As Builts requested/submitted if required			/
u. Passing ELD test results submitted if required			/
v. Soil sample results submitted if required			/
ADDITIONAL INFORMATION:			
a. Reinspection Fee/ Additional hours _____			/
b. COS Form submitted / Billing notification for UST Operating Permit			/
c. UST File update (include photos)/ File plans			/

SUPPLEMENTAL NOTES:

* Verified penetration boots properly replaced in 3 sumps. Sump hydrostatically tested and passed. Lines pressurized (operating) close spill and passed
* All sumps retested and verified all functions passed

(Use additional Supplemental Forms if needed.)

INSPECTOR: [signature]

RECEIVED BY: [signature]

A1/D2

COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

Underground Storage Tank Plan Check Application SR0022799

PLAN CHECK NUMBER 11-062

Application for review of underground storage tank installation, upgrade, modification and/or repair plans. Applicant is to submit four complete sets of plans with an attached material/equipment list for each construction site. All fees are payable at the time the plans are submitted with this application.

FACILITY NAME	FACILITY ADDRESS	CITY	ZIP	PHONE NUMBER
Riverside Comm Hosp.	4445 Magnolia Av	Rv.	92501	(951) 788-3140
NAME OF OWNER	OWNER ADDRESS	CITY	ZIP	PHONE NUMBER
Same				
NAME OF OPERATOR	OPERATOR ADDRESS	CITY	ZIP	PHONE NUMBER
Same				
NAME OF CONTRACTOR	CONTRACTOR ADDRESS	CITY	ZIP	PHONE NUMBER
Cal Haz	2265 S. Yale St	Santa Ana	92704	(714) 434-9996
NAME OF ENGINEER/ARCHITECT	ENGINEER/ARCHITECT ADDRESS	CITY	ZIP	PHONE NUMBER
Ernie Bravo	16160 Conifer Cir	Corona	92879	(626) 827-0072

SCOPE OF WORK: (CHECK ALL THAT APPLY)

☐ NEW INSTALLATION or

☐ OTHER (Describe below)

☐ UPGRADE
- ☐ INSTALLATION OF DISPENSER CONTAINMENT.
- ☐ INSTALLATION OF DOUBLE-WALL PIPING.
- ☐ INSTALLATION OF SUMP AROUND TURBINE/FILL.

☒ MODIFICATION
- ☐ INSTALLATION OF ELECTRONIC IN-LINE LEAK DETECTOR WITH POSITIVE SHUT-DOWN OF TURBINE.
- ☐ INSTALLATION OF A NEW MONITORING SYSTEM OR COMPONENT.
- ☐ INSTALLATION OF SPILL CONTAINER.
- ☐ INSTALLATION OF OVERFILL PROTECTION.

☒ REPAIR (Describe below)
Cable Replacement, Penetration & Test Boot Replacement

SITE INFORMATION:

NUMBER OF TANK SYSTEMS	CONTENTS OF TANK(S)	TYPE OF MONITORING
Split	Diesel	Veeder Root TLS-350

ESTIMATED CONSTRUCTION START DATE	ESTIMATED CONSTRUCTION COMPLETION DATE
ASAP.	3 to 4 days After Approval.

APPLICANT NAME (PRINT)	APPLICANT SIGNATURE	DATE
Ernie Bravo	[signature]	5-18-2011

FAILURE TO COMPLETE MANDATED WORK IN SPECIFIED TIME FRAME MAY RESULT IN FURTHER ENFORCEMENT ACTION

*PLEASE MAKE CHECK PAYABLE TO COUNTY OF RIVERSIDE

FOR OFFICE USE ONLY

Amount Attached $ 714.00

FACILITY # FA0014577

Transaction No. A2413374

Check #43579

DOH-HEH-004 (Rev. 03/04)

White-Applicant Canary-File Pink-Specialist

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health Hazardous Materials Management Division
Underground Storage Tank Inspection Report — Double Walled System

Facility Name: Riverside Community Hospital
Date: April 25, 2011
Address: 4445 Magnolia Ave
Inspection: Routine [ ] Reinspection [X]
City: Riverside
Zip Code: 92501
Facility #: FA0014577
Contact Person:
Phone No.:
ICC Certified Tech Present: Yes [ ] No [X]

Refer to Title 23 of California Code of Regulations (CCR), Chapter 6.7 of the California Health and Safety Code (CHSC). Items marked "N" are violations of the Underground Storage Tank laws and regulations and must be corrected in the inspection report. N/A is not applicable or unable to verify.

ITEM NO.	UST SYSTEM RECORDS	CODE SECTIONS	Tank ID: Diesel / Size			Tank ID / Size			Tank ID / Size			Tank ID / Size		
			Y	N	N/A	Y	N	N/A	Y	N	N/A	Y	N	N/A
301	UPC Form A and B current	2711(c), 25286(a), 2712(i)	/											
302	Financial Responsibility current	25292.2(a), 2712(i)	/											
303	Owner/Operator Agreement submitted	2620(b), 25284(a)(3), 2712(i)	/											
304	Monitoring Plan approved	2632(b), 2712(i)	/											
305	Unauthorized Release Response Plan current	2632(c)(2)(D)(2), 2712(i)	/											
306	Permits current and retained at facility	2712(i), 25284(a)	/											
307	Continuous monitoring system certified annually/Annual spill container test	2630(d), 2638, 25284.2	/											
308	Secondary containment tested as required	2637, 25284(a)(4)(B)		/										
309	Releases reported/recorded	2650(b), 2651, 2652	/											
310	Maintenance and monitoring records available	2712(b)	/											
311	Owner Statement/Designated Operator/Monthly Inspections/Training	2715(a)-(f)	/											
	UST SYSTEM INSPECTION													
312	Alarm status is normal/Alarm history available	2638(a), 25293	/											
313	Audible and visual alarms are functioning properly	2632(c)(2)(B), 2636(f)(1)	/											
314	Sticker/tag affixed to monitoring equipment at certification	2638(f)	/											
315	UST system has approved overfill protection	2635(b)(2)	/											
316	Spill container in good condition and liquid free.	2635(b)(1)	/											
317	Spill container drain appears functional or alternative available.	2635(b)(1)(C)	/											
318	All containment sumps clean/liquid free/good condition.	2631(e)(4), 25291(e)	/											
319	Secondary containment system drained to monitored sump	2636(c)(1), 2636(f)	/											
320	Sensors placed at low point in all sumps	2630(d), 25299(a)(9)	/											
321	Under dispenser containment monitored	2636(f), 2636(g)(2)	/											
322	Contractor/CMD Technician trained/ICC Certified	2638(b), 2715(i)	/											
	MONITORING OPTIONS FOR PRESSURIZED SYSTEMS													
	OPTION 1													
323	UDC - Shut down the turbine or stops flow of product at dispenser	2636(f)(5)(A)												
324	PPS - Shut down the turbine when a leak is detected and fail-safe	2636(f)(5)(B)												
325	Line leak detector detects 3.0 gph or equivalent and is certified annually	2636(f)(2), 2638(a)												
	OPTION 2													
326	UDC & PPS - Audible and visual alarm or stops flow of product at dispenser	2636(f)(1)												
327	Line leak detector detects 3.0 gph or equivalent and is certified annually	2636(f)(2), 2638(a)												
328	Annual pipeline integrity test detects .1 gph at 150% of operating pressure	2636(f)(4)												
	OPTION 3 - EMERGENCY GENERATORS WITH PRESSURIZED PIPING													
329	PPS - Audible and visual alarm	2636(f)(1)												
330	Monitoring system checked daily and logged	2636(f)(6)												
331	Annual pipeline integrity test detects .1 gph at 150% of operating pressure	2636(f)(4)												
	OPTION 4 - VACCUM/PRESSURE/HYDROSTATIC (VPH) SYSTEMS													
332	VPH System is operational/alarm status normal	25290.1(d), 25290.1(e)												
333	Continuous audible and visual alarm	25290.1(d), 25290.1(e)												
334	Line leak detector detects 3.0 gph or equivalent and is certified annually	25290.1(h), 2638(a)												
	OPTION 5 - DOUBLE WALL SUCTION, GRAVITY, REMOTE													
335	Continuous audible and visual alarm or stops flow of product at dispenser	2636(f)(1)	/											

ENTERED JB 5/10/11

See Supplemental Report

☐ **NOTICE OF VIOLATION:** The violations noted above must be corrected within ( ) days. Failure to comply may result in legal action.

Specialist: R. Gerron
Received by:
Title

Riverside Office (951) 358-5055
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Hemet, CA 92545

Corona Office (951) 273-9143
2275 S. Main Street, Ste. 204
Corona, CA 92882

PR 18884 FA 14577

5208

ENTERED

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health Hazardous Materials Management Division
Hazardous Waste Generator Inspection Report

Facility Name: Riverside Community Hospital Date: June 17, 2010
Address: 4445 Magnolia Ave Inspection: Routine [✓] Reinspection [ ]
City: Riverside Zip Code: 92501 Facility #FA0014577 Type of Generator: ☐ LQG ☑ SQG
Contact Person: # of Employees: Telephone:

Riv. County Code, Title 8.60 (Ordinance 615.3) Calif. Code of Regulations Title 22 Health & Safety Code Chapter 6.5
Items marked "Y" (Yes) are in compliance. Items marked "N" (No) are violations and must be corrected as outlined in the inspection report. N/A is not applicable or unable to verify.

Hazardous Waste Storage	Y	N	N/A	General Hazardous Waste Requirements	Y	N	N/A
200. Access for Inspection HSC 25185, 25185	✓			223. Hazardous Waste Generator Permit Fees RCC title 8.60	✓		
201. Maintained and Operated to Minimize the Possibility of Fire, Explosion, or Release CCR 66265.31, 66262.34(a), HSC 25123.3(h)(i)	✓			224. EPA ID Number CA ____ CCR 66262.12(a)	✓		
202. Accumulation Time CCR 66262.34(a)(1), 66262.34(d), HSC 25123.3(h)(i)	✓			225. Hazardous Waste Determination CCR 66262.11, 66260.200(c)	✓		
203. Satellite Accumulation CCR 66262.34(e)	✓			226. Disposed/Treated at an Authorized Location HSC 25189.5(a), 25189.5(d), 25250.5(a), 25217.1, CCR 66268.3(a)	✓		
204. Separation of Incompatible Materials CCR 66265.177, 66262.34(d), HSC 25123.3(h)(i)	✓			227. Treatment/Storage/Transfer/Disposal Permit HSC 25201(a), CCR 66270.1			✓
Containers				228. Recycling Plan Complete and Reported HSC 25143.10			✓
205. Compatibility of Waste with Container CCR 66265.172, 66262.34(d), HSC 25123.3(h)(i)	✓			229. Excluded Recyclable materials HSC 25143.2			✓
206. Container Marking and Labeling CCR 66262.34(a)(2), 66262.34(a)(3), 66262.34(f), 66261.7(f), HSC 25124(b)(3)		✓		**Records Review**			
207. Weekly Inspections CCR 66265.174, 66262.34(d), HSC 25123.3(h)(i)	✓			230. Manifest Requirements/Consolidated Manifest CCR 66262.40, 66262.20-66262.23, 66263.71(a), HSC 25160.2, 25250.18	✓		
208. Container Condition CCR 66265.171, 66262.34(d), HSC 25123.3(h)(i)	✓			231. Manifest Exception Reports CCR 66262.42			✓
209. Containers Not Leaking CCR 66265.173(b), 66262.34(d), HSC25123.3(h)(i)	✓			232. Personnel Training CCR 66265.16, 66262.34(d), HSC 25123.3(h)(i)	✓		
210. Containers Closed CCR 66265.173(a), 66262.34(d), HSC 25123.3(h)(i)		✓		233. Waste Analysis CCR 66262.40(c)			✓
211. Ignitable or Reactive Wastes Stored at Least 50 ft. from Property Line CCR 66265.176, 66262.34(d), HSC 25123.3(h)(i)				234. Hazardous Waste Source Reduction & Management Plan CCR 67100.1-67100.11			✓
212. Aisle Space CCR 66265.35, 66262.34(d), HSC 25123.3(h)(i)				235. Biennial Reports CCR 66262.41			✓
Aboveground Hazardous Waste Tank Systems				**Transportation**			
213. Containment of and Detection of Leaks CCR 66265.193				236. Use of a Registered Transporter of Hazardous Waste HSC 25163(a), CCR 66262.12(c)	✓		
214. Waste Tank Standards CCR 66265.194, 66262.34(d), HSC 25123.3(h)(i)				**Miscellaneous**			
215. Inspection of Aboveground Hazardous Waste Tanks CCR 66265.195, 66262.34(d), HSC 25123.3(h)(i)				237. Used Oil Not Contaminated with Hazardous Waste HSC 25250.7	✓		
216. Leaks, Spills, or Unfit ASTs CCR 66265.196-197, 66262.34(d)				238. Used Oil and/or Fuel Filters CCR 66266.130, HSC 25250.22		✓	
Preparedness, Prevention and Contingency Planning				239. Batteries Properly Managed CCR 66266.81	✓		
217. Required Fire, Spill & Decontamination Equipment CCR 66265.32(c), 66262.34(d), HSC 25123.3(h)(i)	✓			240. Universal Waste CCR 66273 Conditionally Exempt Small Quantity Universal Waste Generator Requirements	✓		
218. Testing and Maintenance of Equipment CCR 66265.33, 66262.34(d)	✓			241. Small Quantity Universal Waste Handler(see attached report)			✓
219. Access to Communications or Alarms CCR 66265.34, 66262.34(d)	✓			242. Large Quantity Universal Waste Handler(see attached report)			✓
220. Evacuation Plan CCR 66265.52	✓			243. Contaminated Rags HSC 25144.6			✓
221. Emergency Coordinator Listed CCR 66265.55, 66262.34(d)	✓			244. Silver Only Waste HSC 25143.13			✓
222. Emergency Response Procedures CCR 66265.51-53, 66262.34(d)	✓			245. Other:			✓

See Supplemental Report

☐ *Notice of Violation*
The above violations shall be corrected within ___days.
Specialist: Richard Gomez

Received by: [signature]
Print Name: JOSE TORRES
Title: DIRECTOR FACILITIES

Riverside Office (951) 358-5055
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2275 S. Main St. Ste. 204
Corona, CA 92882

Distribution: White-Office, Canary-Owner/Operator, Pink-Specialist

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

SUPPLEMENTAL REPORT

Reference Date June 17, 2010

Name Riverside Community Hospital

Address 4445 Magnolia Ave Riverside 92501

Re: Hazardous waste generator inspection Facility # FA0014577

Remarks:

Hazardous waste streams: · Used oil
· Pharmaceuticals
· Solvent waste (xylene)
· Universal waste

The following inspection items need correction by July 17, 2010

Item 206 (237) Used oil drums were not properly labeled with complete legible labels at the time of inspection. Accumulation start date not marked on drums.
Correction - All hazardous waste storage drums are required to be properly labeled as hazardous waste including an accumulation start date

Item 210 Solvent waste drum in lab not properly closed while in storage. Lid was on but the ring was not fastened.
Correction: Waste drum required to be closed with ring if not in immediate use, closed drum required to minimize risk of spill and help reduce exposure.

Specialist Richard Guerrero Received By

DEH-HEH-002 (rev 5/02) HMHC 2002 white-specialist; yellow-operator; pink-file

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health Hazardous Materials Management Division
Hazardous Waste Generator Inspection Report

Facility Name: Community Medical Group
Date: January 2009
Address: 4444 Magnolia Ave
Inspection: Routine [✓] Reinspection [ ]
City: Riverside Zip Code: 92501 Facility # FA0019264 Type of Generator: [ ] LQG [✓] SQG
Contact Person: Mr Richard Finn # of Employees: 81 Telephone: 951 274 3438

Riv. County Code, Title 8.60 (Ordinance 615.3) Calif. Code of Regulations Title 22 Health & Safety Code Chapter 6.5
Items marked "Y" (Yes) are in compliance. Items marked "N" (No) are violations and must be corrected as outlined in the inspection report. N/A is not applicable or unable to verify.

Hazardous Waste Storage	Y	N	N/A	General Hazardous Waste Requirements	Y	N	N/A
200. Access for Inspection HSC 25185, 25185	✓			223. Hazardous Waste Generator Permit Fees RCO Title 8.60	✓		
201. Maintained and Operated to Minimize the Possibility of Fire, Explosion, or Release CCR 66265.31, 66262.34(d), HSC 25123.3(h)(i)	✓			224. EPA ID Number CA CCR 66262.12(a)	✓		
202. Accumulation Time CCR 66262.34(a)(c), 66262.34(d), HSC 25123.3(h)(i)	✓			225. Hazardous Waste Determination CCR 66262.11, 66262.200(c)	✓		
203. Satellite Accumulation CCR 66262.34(a)			✓	226. Disposed/Treated at an Authorized Location HSC 25189.5(a), 25189.5(d), 25250.3(a), 25217.1, CCR 66268.3(a)	✓		
204. Separation of Incompatible Materials CCR 66265.177, 66262.34(d), HSC 25123.3(h)(i)			✓	227. Treatment/Storage/Transfer/Disposal Permit HSC 25208(a), CCR 66270.1			
Containers				228. Recycling Plan Complete and Reported HSC 25143.10			
205. Compatibility of Waste with Container CCR 66265.172, 66262.34(d), HSC 25123.3(h)(i)	✓			229. Excluded Recyclable materials HSC 25143.2			
206. Container Marking and Labeling CCR 66262.34(a)(2), 66262.34(a)(3), 66262.34(f), 66261.7(f), HSC 25124(h)(3)	✓			**Records Review**			
207. Weekly Inspections CCR 66265.174, 66262.34(d), HSC 25123.3(h)(i)	✓			230. Manifest Requirements/Consolidated Manifest CCR 66262.40, 66262.20, 66262.23, 66263.7(a), HSC 25160.2, 25250.18	✓		
208. Container Condition CCR 66265.171, 66262.34(d), HSC 25123.3(h)(i)	✓			231. Manifest Exception Reports CCR 66262.42			✓
209. Containers Not Leaking CCR 66265.173(b), 66262.34(d), HSC 25123.3(h)(i)	✓			232. Personnel Training CCR 66265.16, 66262.34(d), HSC 25123.3(h)(i)	✓		
210. Containers Closed CCR 66265.173(a), 66262.34(d), HSC 25123.3(h)(i)	✓			233. Waste Analysis CCR 66262.40(c)	✓		
211. Ignitable or Reactive Wastes Stored at Least 50 ft. from Property Line CCR 66265.176, 66262.34(d), HSC 25123.3(h)(i)			✓	234. Hazardous Waste Source Reduction & Management Plan CCR 67100.1-67100.11			✓
212. Aisle Space CCR 66265.35, 66262.34(d), HSC 25123.3(h)(i)	✓			235. Biennial Reports CCR 66262.41			✓
Aboveground Hazardous Waste Tank Systems				**Transportation**			
213. Containment of and Detection of Leaks CCR 66265.193				236. Use of a Registered Transporter of Hazardous Waste HSC 25163(a), CCR 66262.12(c)	✓		
214. Waste Tank Standards CCR 66265.194, 66262.34(d), HSC 25123.3(h)(i)				**Miscellaneous**			
215. Inspection of Aboveground Hazardous Waste Tanks CCR 66265.195, 66262.34(d), HSC 25123.3(h)(i)				237. Used Oil Not Contaminated with Hazardous Waste HSC 25250.7			✓
216. Leaks, Spills, or Unfit ASTs CCR 66265.196-197, 66262.34(d)				238. Used Oil and/or Fuel Filters CCR 66266.130, HSC 25250.22			✓
Preparedness, Prevention and Contingency Planning				239. Batteries Properly Managed CCR 66266.81			✓
217. Required Fire, Spill & Decontamination Equipment CCR 66265.32(e), 66262.34(d), HSC 25123.3(h)(i)	✓			240. Universal Waste CCR 66273 Conditionally Exempt Small Quantity Universal Waste Generator Requirements			✓
218. Testing and Maintenance of Equipment CCR 66265.33, 66262.34(d)	✓			241. Small Quantity Universal Waste Handler(see attached report)			✓
219. Access to Communications or Alarms CCR 66265.34, 66262.34(d)	✓			242. Large Quantity Universal Waste Handler(see attached report)			✓
220. Evacuation Plan CCR 66265.52	✓			243. Contaminated Rags HSC 25144.6			✓
221. Emergency Coordinator Listed CCR 66265.55, 66262.34(d)	✓			244. Silver Only Waste HSC 25143.3	✓		
222. Emergency Response Procedures CCR 66265.51-53, 66262.34(d)	✓			245. Other:			✓

Hazardous waste streams: Silver recovery filters

Inspection Notes - • Disposal records available
• Area maintained in good condition
• Containers labeled

☒ No Violations

Notice of Violation

The above violations shall be corrected within ___ days.

Specialist: K. Guerra

Received by: Delia A. Muñoz

Print Name: DELIA R. MUÑOZ

Title: Radiology Supervisor

Riverside Office (951) 358-5055
P.O. Box 7489
Riverside, CA 92513-7489

Indio Office (760) 863-8976
47-950 Arabia St., Ste. A
Indio, CA 92201

Hemet Office (951) 766-6524
800 S. Sanderson Ave. Ste. 102
Hemet, CA 92545

Corona Office (951) 273-9143
2275 S. Main St. Ste. 204
Corona, CA 92882

Distribution: White-Office, Canary-Owner/Operator, Pink-Specialist

Riverside County
Local Oversight Program
Electronic Case File

Site Name: Riverside Community Hospital

Site Number: 871557

Electronic File #: 1

File organized chronologically starting with #1

Site Id: **87557** Site Name: **Riverside Community Hospital**
ADDRESS> Street Number: **4445** Street: **Magnolia Ave**
City: **Riverside** Zip Code: **92501** Employee Number: **3**

Substance: **12034** ; ; ; ; Priority:
Date Reported: **8/14/1987** Date Confirmed: **3/1/1989** Category: **R**
Fund: **F** Fed Exempt: **N** Petroleum: **Y** Case Type: **S** Contract Status: **9**

RP Search:	**S**	Date Begin:	**8/14/1987**	Date End:	**3/1/1989**
Prelim Assessment:	**C**	Date Begin:	**10/29/1987**	Date End:	**3/1/1989**
Remedial Investig:	**C**	Date Begin:	**1/23/1989**	Date End:	**3/1/1989**
Remedial Action:	**C**	Date Begin:	**3/1/1989**	Date End:	**6/28/1989**
Post Remedial Monitoring:		Date Begin:		Date End:	

DT Emerg Resp: Enf Action: Type: DT Action:

Date Last Corsp: Case Closed: **Y** Date Closed: **9/27/1989**
DT Exc Start: **6/22/1989** Reimb Letter: **Y** Luft Category: **2SCAR**
Remed Action: **ED** Supv Dist: **1** Region: Santa Ana Cap Exten Exp:

Rp Contact Name: **David Adams** RP Cost:
Rp Company Name: **Riverside Community Hospital** RP Phone:
Address: **4445** Street: **Magnolia Ave**
City: **Riverside** State/Zip: **CA 92501**

RP #2 - RP Phone:
RP Contact Name:
RP Company Name:
Address: Street:
City: State/Zip:

RP #3 - RP Phone:
RP Contact Name:
RP Company Name:
Address: Street:
City: State/Zip:

RP #4 - RP Phone:
RP Contact Name:
RP Company Name:
Address: Street:
City: State/Zip:

COMMENT :

Up Date: 1/19/2005

COUNTY OF RIVERSIDE
DEPARTMENT OF HEALTH
4065 COUNTY CIRCLE DR. RIVERSIDE, CA. 92503 (Mailing Address - P.O. Box 7600 92513-7600)
FACS # (714) 358-4529

December 13, 1989

Mr. Reginald Meigs
City of Riverside
Planning Department
3900 Main Street
Riverside, CA 92522

RE: Contaminated Soil Remaining on City Sites

Dear Mr. Meigs:

The County of Riverside, Department of Health, hereby notifies you of contaminated soil remaining on two sites recently remediated for underground storage tank leaks. These properties are:

Continental Baking Company, 1781 Third Street
Riverside Community Hospital, 4445 Magnolia Avenue

The sites have been remediated as fully as possible, but some contaminated soil could not be reached because it was located under buildings in both cases. However, as the remaining amounts of contaminated soil were small and adequately protected from the elements, we do not feel that they currently pose a health hazard.

At Continental Baking, the remaining amount of contaminated soil is approximately eight cubic yards. At Riverside Community Hospital, the volume was difficult to estimate, as the limit of contamination under the building could not be satisfactorily reached. However, contaminated soil is definitely present and will need to be addressed at some time in the future.

CINDRA ROWELL, B.S.N., M.B.A.
DEPUTY DIRECTOR OF HEALTH
PERSONAL HEALTH SERVICES

J.M. FANNING, R.S., M.P.A.
DEPUTY DIRECTOR OF HEALTH
ENVIRONMENTAL HEALTH SERVICES

E.J. GALLAGHER, M.D., M.P.H., M.A.
DIRECTOR OF HEALTH

H.C. HOLK, D.V.M., M.P.H.
DEPUTY DIRECTOR OF HEALTH
SPECIAL SERVICES

E.R. COYNE, M.S.
DEPUTY DIRECTOR OF HEALTH
ADMIN. & SUPPORT SERVICES

HEALTH CENTERS

BANNING 3055 RAMSEY STREET - Banning, CA 92220 ● BLYTHE 263 NORTH BROADWAY - Blythe, CA 92225 ● CASA BLANCA 7240 MARGUERITA - Riverside, CA 92504 ● CORONA 505 SOUTH BUENA VISTA - Corona, CA 91720 ● HEMET 880 NORTH STATE STREET - Hemet, CA 92343 ● INDIO 46-209 OASIS STREET - Indio, CA 92201 LAKE ELSINORE 30195 FRASER DR. - Lake Elsinore, CA 92330 ● PALM SPRINGS 3255 TAHQUITZ- McCALLUM - Palm Springs, CA 92262 ● PERRIS 237 NORTH "D" ST. -

We recommend that the responsible parties amend the deeds to their properties to show the remaining contamination. However, we cannot require them to do this. For this reason we think that informing your department will ensure that this information will not be forgotten whenever the property changes hands. With your concurrence, we will make a regular practice of referring this information to you whenever we close a city case under these conditions.

If you have any questions or need additional information, please do not hesitate to contact me at (714) 358-5055.

Sincerely,

Robert Lehmann
Supervising Hazardous Materials
Management Specialist

RL:WGS:rja

COUNTY OF RIVERSIDE
DEPARTMENT OF HEALTH
4065 COUNTY CIRCLE DR. RIVERSIDE, CA. 92503 (Mailing Address - P.O. Box 7600 92513-7600)

September 27, 1989

Mr. David Adams
Riverside Community Hospital
4445 Magnolia
Riverside, CA 92501

Dear Mr. Adams:

This letter confirms the completion of site investigation and remedial action at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is our position that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present, or future operations at this site. Nor does it relieve you of the responsibility to cleanup existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings, or site usage.

If you have any questions regarding this matter, please contact our office at (714) 358-5055.

Sincerely,

Wendy G. Sheridan
Hazardous Materials Specialist

WGS:rja

cc: Mr. Dan Collins, Mittelhauser Corp.
Santa Ana RWQCB
SWRCB

CINDRA ROWELL, B.S.N., M.B.A.
DEPUTY DIRECTOR OF HEALTH
PERSONAL HEALTH SERVICES

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Riv. Community Hosp.

Tim Lester (Mittelhauser) 472-2444
Earl Huckins (Hosp. Eng. Div.) 788-3149

9-26-89 10:35 am - called Tim Lester - where's sig. page?
- they sent it ~ a week ago
10:36 am - called Earl Huckins - where's sig. page?
- left message
2:15 pm - Earl left message
3:25 pm - called Earl - It's in the mail - he will double - check, call if there's a problem

9-27-89 rec'd signature page - CASE CLOSED

Riv. Comm. Hosp.

Mittelhauser
472-2444
Earl Huckins (Eng. dir., Hosp.) 788-3149

7-6-89 8:35 am – Tim Lester called – hosp. has apparently changed their mind about bioremediating – don't have enough space to spare on their property – re considering hauling

7-17-89 1:08 pm – called Tim – what's happening out there? – left message
– he called 1:30 pm – they will haul – putting contract together – w/o contractor to slurry abandon place tank also
– final report ~2 weeks
– req'd. copies of manifests also
– hole is backfilled

8-8-89 9:25 am – called Tim – where's report? – report forwarded to Earl Huckins @ Hospital 1 week ago
9:25 am – called Earl Huckins – he's out today – left message

8-9-89 3:10 pm – called Earl back – his superiors are reviewing report – they are doing some minor wording changes
– hopefully I should have report within ~2 wks (he will check on status) – they have all manifests

8-28-89 3:35 pm – called Earl H. – where's report? – on his desk
– he has to make a few wording changes & get w/ Mittelhauser about them, then will get report to me
– hopefully within the week (also has report on tank abandoned in place)

9-11-89 rec'd final report

9-14-89 8:15 am – called ~~Bob Eichmann~~ Tim Lester – we need signature & reg. number – he will send to Hosp. first

9-21-89 10:35 am – called Earl – rec'd sig. page from Mittelhauser yet? – left message
Ed Sheridan from hosp. called 11:15 am – he will track it down

Riv. Comm. Hosp.

472-2444
Mittelhauser

6-23-89 9:00 am – called Jose Sandoval to notify him of work on last tank – left message – he called back ~9:15am
– told him about work going on – he will review file, get back to me if necessary
9:20 am – called Bob Stechmann to discuss the "understanding" that Tim Lester (geol. on site yesterday) said we had about leaving the contam. soil under the building –
– we want a report covering all the options
– he said OK – would have to send report to HSP/Jose Sandoval first, then to us – will prob. be ~1 month
– discussed action levels, he was not aware of our 300ppm std.
2:10pm – talked to Earl Hutkins (dir. of engineering) 788-3149
– wanted update of situation
– said he would instruct if Jose Sandoval still needs to be involved or not – for now, yes
– they involved a lawyer originally because of Toxguard – said they would have had these tanks taken care of 2 years ago if it weren't for them

---

6-28-89 4pm – Tim Lester (Mittelhauser) called – will continue (hopefully) finish excav. tomorrow – now that quant. of soil is greater than initially anticipated, they want to bioremediate (he wanted verbal approval over phone – told him we need an amended site plan – he seemed disgruntled with this)
– will also have the stuff that's already en route (being hauled) to be returned for bioremed.

07-8-86 – afternoon – Earl Hutkins called – was reviewing amended Mittelhauser site plan, wanted to know if bioremediation was an accepted technology

Riv. Comm. Hosp.

5-4-89 4:35 pm Mittelhauser 472-2444
Dan Collins – Mgr. of geotechnical services
will angle 30° from long ends, 2 samples – 2', 6'
under tank – they want to close in place
– will fax site plan, I will get back w/them
on Monday

5-8-89 11:30 am called Dan Collins – he said he sent it
this am (I've already checked – nothing – will check again)
rec'd – sent 10:01 am (Vital Stats didn't call me)
– approved plan ~11:45 am – called Dan back
– only change: requested that they try & angle under
the tank more to get a sample under center of tank –
will try to move rig back further to do this –
may also try to drill 3rd hole from side (but may
be physically impossible to do this) – angle also
constrained by rig itself

5-17-89 – drilled under tank being abandoned in place

5-23-89 – Jose Sandoval called – I called back 2:20pm, left message
– 2:45pm, Jose called back – wanted to know status
of hosp. – wanted to know where he could get copy of
LUFT manual – told him to contact the State Wtr. Board –
he wants to be contacted when they do the last tank

6-5-89 10:55 am – called Dan Collins – left message
11:20 am ~~called~~ Dan (Bob Stephanopoulos) called back – Mon. June 19 8 am
will abandon in place 1st tank, work on 2nd tank 6/19–23

6-22-89 – visited site 1pm – pulled tank – started excavating –
they would only go to edge of loading dock – worst contam. under dock (whole well
is black) – live water line @ top of wall – can't get backhoe in there,
& can't dig without endangering building

Riv. Comm. Hosp.

5-2-89

called Bob Stechmann 10:30am

- says he has permits, everything's paid up
  - 3000-gal 2-21-89
- other 4 tanks pulled on permit 12-6-88 (only 3 pulled on this permit)

permits { appl. # 89-056 - 2-21-89
" 88-330 - 12-6-88

- they've been calling hosp. regularly - have been hearing "2 weeks" for some time now
- some problems certifying the new tank for the generators, can't pull #6 until new tank is certified (they need a fuel source for the generators)
- they can't push Hosp. too much (because they are working for them)
- I told him I'll call in 2 wks
- asked about vapor extraction - Bob said it won't really work here, soil too clayey, silty

---

surprise visit to Hospital ~1:30pm - met David Adams, saw layout of situation - they are w/o final certification of new generators by elec. eng. - ~~was~~ supposed to be tested Fri 5/5 - when gens. OK, can take out old gens, move dumpster to get into tank loc. under loading dock

12/12/89

Estimated volume of remaining contaminated soil
@ Riverside Community Hospital

B2

$\measuredangle = 27.5°$

TD = 59'

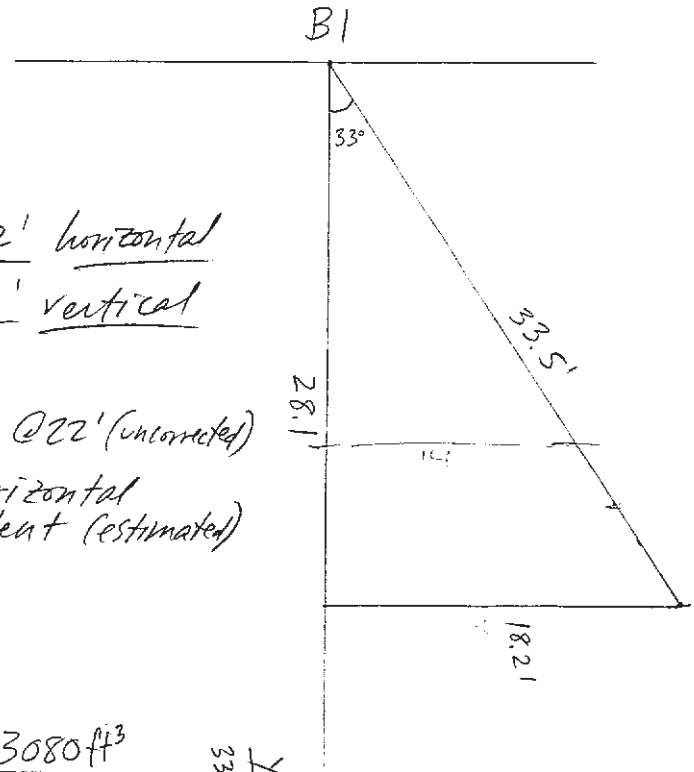
(sin 27.5) 59 = 27.2' horizontal

(cos 27.5) 59 = 52.3' vertical

contam to ~22'

est. end of contam @22' (uncorrected)

⇒ 10' horizontal extent (estimated)



TD = 33.5' not corrected for actual vertical depth.

est. volume

W L D

10' x 14' x 22' = $\frac{3080 ft^3}{3}$

= 1026 yd^3 ??

$\frac{x}{33.5} = \cos 33°$ vertical

$(\cos 33°)(33.5') = 28.1'$

$\frac{x}{33.5} = \sin 33°$ horizontal

$(\sin 33°)(33.5') = 18.2'$

est. end of contam. ~25'

⇒ ~14' horiz. extent of contam.

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

June 6, 1989

Ms. Wendy Sheridan
Riverside County Department of Health
Environmental Division
4065 County Circle Drive
Riverside, CA 92503

SUBJECT: Analytical Results of Soil Samples Collected Beneath 6,000-gallon Diesel Tank

Dear Wendy:

As you requested, enclosed is a copy of the analytical results of the five soil samples collected from beneath the 6,000-gallon diesel storage tank at the Riverside Community Hospital. The work plan to conduct this investigation was outlined in our May 8, 1989 letter to you.

No petroleum hydrocarbons were detected in any of the five samples. Due to the presence of a vault over this tank, Riverside Community Hospital plans on abandoning this tank in place. The abandonment procedures are scheduled to commence June 19, 1989. Your office will be contacted when the final scheduling is completed. If you have any questions or comments, please contact Dan Collins or myself.

Sincerely,

MITTELHAUSER CORPORATION

Robert J. Stechmann, Jr.

Robert J. Stechmann, Jr.
Project Geologist

RJS:mas
1074CH
Enclosure

cc: Earl Huckins, Riverside Community Hospital

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900
FAX 714/538-1209

CLIENT

Mittelhauser Corporation (3055)
23272 Mill Creek Drive
Suite 300
Laguna Hills, CA 92653
Attn: Eric Conard

LAB NO F65612

REPORTED 05/18/89

SAMPLE Soil

RECEIVED 05/17/89

IDENTIFICATION Proj. No. 1074, Riverside Comm. Hospital

BASED ON SAMPLE As Submitted

	Hydrocarbons (418.1) (mg/kg)
1074-03-01	ND<10
1074-03-02	ND<10
1074-03-03	ND<10
1074-03-04	ND<10
1074-03-05	ND<10

ASSOCIATED LABORATORIES

Edward S. Behare, Ph.D.

ESB/ql

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

TESTING & CONSULTING
Chemical •
Microbiological •
Environmental •

The reports of the Associated Laboratories are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

May 8, 1989

Ms. Wendy Sheridan
Riverside County Department of Health
Environmental Division
4065 County Circle Drive
Riverside, CA 92503

SUBJECT: Work Plan for Leak Detection Investigation
Riverside Community Hospital
Tank T2

Dear Wendy:

Per our discussion by telephone yesterday, Riverside Community Hospital has decided to modify its tank removal permit to include in-place abandonment, rather than removal of Tank "T2" (see attached Figures for location of tank). This letter describes the plan by which soil samples will be collected and analyzed by Mittelhauser Corporation in order to satisfy the requirement that no unauthorized discharge from the tank has occurred. We are preparing to conduct the drilling and sampling on Thursday, May 11, 1989 provided that this work plan meets with your approval.

Soil samples will be collected from two and six feet beneath Tank T2 using a hollow-stem auger rig to drill two slant borings near the ends of the tank (see attached cross section figure). A split spoon sampler and metal liners will be used to obtain the samples of soil. The augers will be drilled into the soil underneath the tanks at an angle of approximately 30 degrees from vertical. Borings will be drilled under the fill pipe on the west side of the tank and under vault lid on the east side of the tank. Augers will be steam cleaned between borings to prevent cross contamination.

Samples will be collected in brass liners and sealed immediately after retrieval. Brass liners will be sealed with aluminum foil, capped with plastic ends, and taped with electrical tape to prevent the loss of any possible volatiles. Samples will be labeled and placed in an ice chest with for delivery to the laboratory. A chain-of-custody form will be initiated in the field by Mittelhauser for the said samples. A total of four samples will be collected.

Sampling equipment also will be decontaminated after each sample is recovered. The split spoon sampler will be taken apart and washed in a phosphatic detergent solution and triple rinsed with distilled water.

Drilling will be performed by Geo-Sec Drilling Company. All borings will be backfilled with cement grout after sampling has been completed. Samples will be delivered to a state certified hazardous waste testing laboratory and analyzed for Total Petroleum Hydrocarbons using EPA Method 418.1

Contaminated soils encountered during drilling will be stockpiled and arrangements will be made with the hospital for appropriate disposal to a hazardous waste disposal facility. Clean soil cuttings will be stockpiled on-site and used for backfill in the other tank removal operation to take place in the near future.

The results of the leak detection investigation will be submitted to your office as they become available. Following this, we will discuss the results with you or your associates regarding the hospitals need to abandon the tank in place.

If you should have any questions regarding this work plan, please call me by Tuesday, May 9, 1989. Otherwise we shall assume the work plan is suitable for its intended purpose.

Sincerely,

MITTELHAUSER CORPORATION

Daniel E. Collins

Daniel E. Collins
Geotechnical Services Manager

DEC:mlp
SV 1074CE

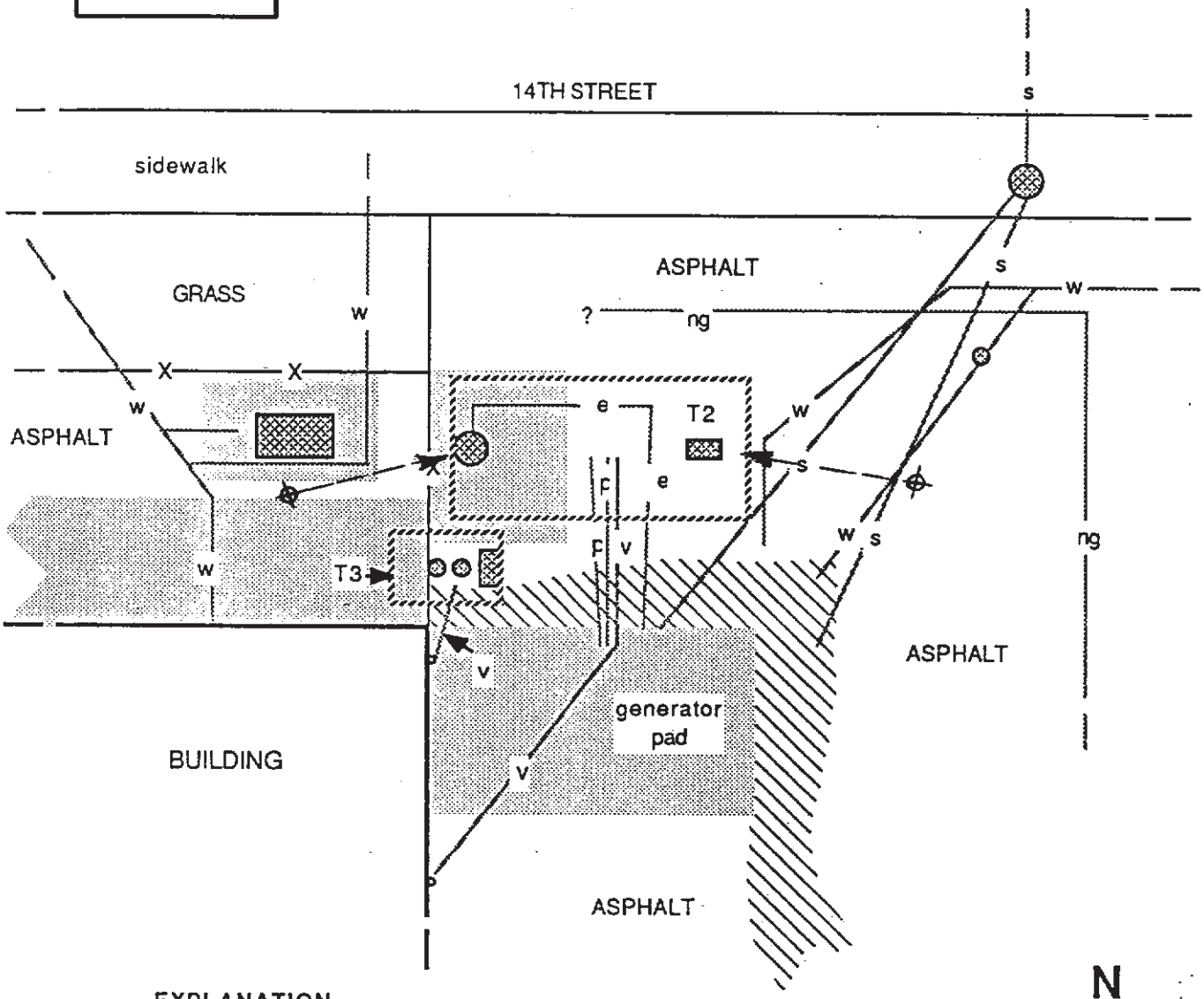
Attachments: (1) Subsurface Facilities Location Map
(2) Cross-section of Proposed Borings

BELOW GROUND FACILITIES* ON A PORTION OF
THE RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

ENVIRONMENTAL GEOPHYSICAL SURVEYS
& UNDERGROUND LOCATION

SITE TWO



EXPLANATION

Surface Trace of Conduit	
Surface Trace of Subsurface Tank	
Vault Lid	
Reinforced Concrete	
Excavation	
Chain Link Fence	

CONDUITS	
p	Product
v	Vent
e	Electric
ng	Natural Gas
w	Water
s	Sewer

Approximate location of angle borehole

0 10
ONE INCH EQUALS TEN FEET

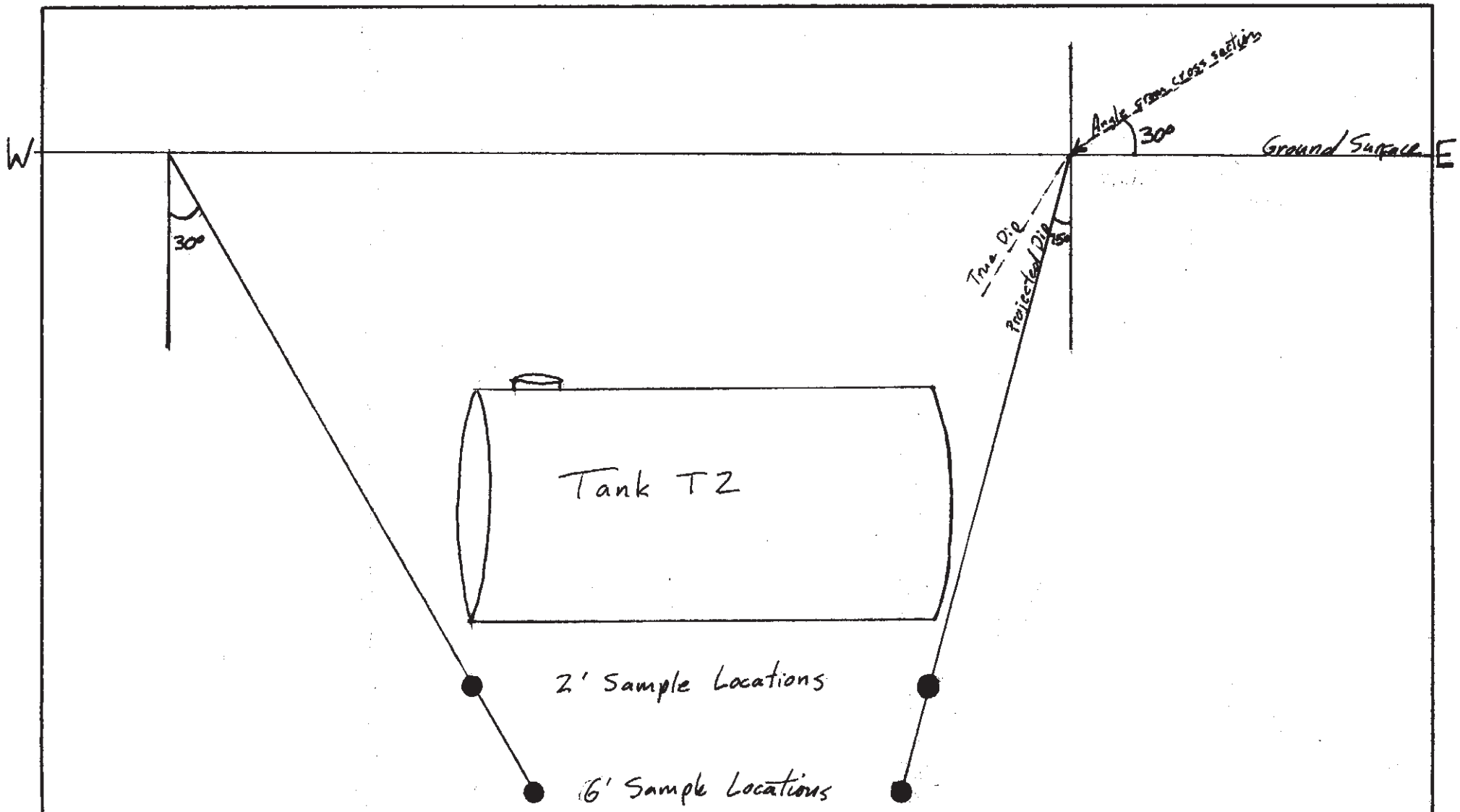
N

TANK DATA

TANK	VOLUME (GALS)	DIMENSIONS (FT)	UPPERMOST LEVEL(FT)	LOWEST LEVEL(FT)
T2	6,000	8 X 17	8.4	16.4
		5	2.8	6.8

8101401E
J. LeTourneau

*Not all below ground facilities may be represented on this map.



Horizontal & Verticle Scale

0 2.5' 5' 10'

One Inch = Five Feet

Cross Sectional View of Sampling Plan, Rside Community Hospital, Tank T2

MITTELHAUSER corporation

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

May 8, 1989

Ms. Wendy Sheridan
Riverside County Department of Health
Environmental Division
4065 County Circle Drive
Riverside, CA 92503

SUBJECT: Work Plan for Leak Detection Investigation
Riverside Community Hospital
Tank T2

approved 5-8-89 ~11:45 am

Dear Wendy:

Per our discussion by telephone yesterday, Riverside Community Hospital has decided to modify its tank removal permit to include in-place abandonment, rather than removal of Tank "T2" (see attached Figures for location of tank). This letter describes the plan by which soil samples will be collected and analyzed by Mittelhauser Corporation in order to satisfy the requirement that no unauthorized discharge from the tank has occurred. We are preparing to conduct the drilling and sampling on Thursday, May 11, 1989 provided that this work plan meets with your approval.

Soil samples will be collected from two and six feet beneath Tank T2 using a hollow-stem auger rig to drill two slant borings near the ends of the tank (see attached cross section figure). A split spoon sampler and metal liners will be used to obtain the samples of soil. The augers will be drilled into the soil underneath the tanks at an angle of approximately 30 degrees from vertical. Borings will be drilled under the fill pipe on the west side of the tank and under vault lid on the east side of the tank. Augers will be steam cleaned between borings to prevent cross contamination.

Samples will be collected in brass liners and sealed immediately after retrieval. Brass liners will be sealed with aluminum foil, capped with plastic ends, and taped with electrical tape to prevent the loss of any possible volatiles. Samples will be labeled and placed in an ice chest with for delivery to the laboratory. A chain-of-custody form will be initiated in the field by Mittelhauser for the said samples. A total of four samples will be collected.

Sampling equipment also will be decontaminated after each sample is recovered. The split spoon sampler will be taken apart and washed in a phosphatic detergent solution and triple rinsed with distilled water.

Drilling will be performed by Geo-Sec Drilling Company. All borings will be backfilled with cement grout after sampling has been completed. Samples will be delivered to a state certified hazardous waste testing laboratory and analyzed for Total Petroleum Hydrocarbons using EPA Method 418.1

Contaminated soils encountered during drilling will be stockpiled and arrangements will be made with the hospital for appropriate disposal to a hazardous waste disposal facility. Clean soil cuttings will be stockpiled on-site and used for backfill in the other tank removal operation to take place in the near future.

The results of the leak detection investigation will be submitted to your office as they become available. Following this, we will discuss the results with you or your associates regarding the hospitals need to abandon the tank in place.

If you should have any questions regarding this work plan, please call me by Tuesday, May 9, 1989. Otherwise we shall assume the work plan is suitable for its intended purpose.

Sincerely,

MITTELHAUSER CORPORATION

Daniel E. Collins

Daniel E. Collins
Geotechnical Services Manager

DEC:mlp
SV 1074CE

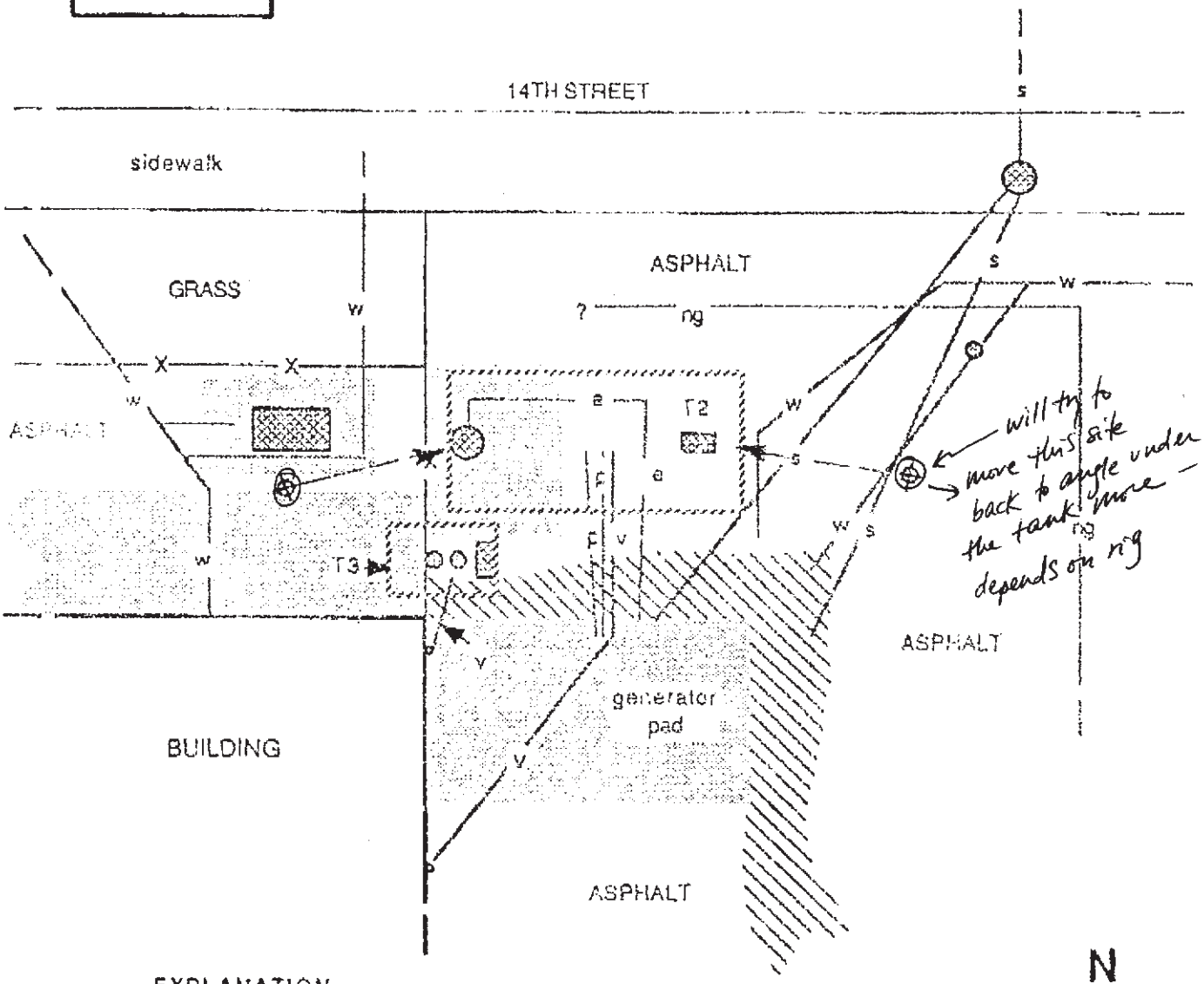
Attachments: (1) Subsurface Facilities Location Map
(2) Cross-section of Proposed Borings

BELOW GROUND FACILITIES* ON A PORTION OF
THE RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA, RIVERSIDE, CA

SPECTRUM E.S.I.

ENVIRONMENTAL GEOPHYSICAL SURVEYS
& UNDERGROUND LOCATION

SITE TWO



EXPLANATION

Surface Trace of Conduit	
Surface Trace of Subsurface Tank	
Vault Lid	
Reinforced Concrete	
Excavation	
Chain Link Fence	

CONDUITS	
p	Product
v	Vent
e	Electric
ng	Natural Gas
w	Water
s	Sewer

Approximate location of angle borehole.

0 1 G
ONE INCH EQUALS TEN FEET

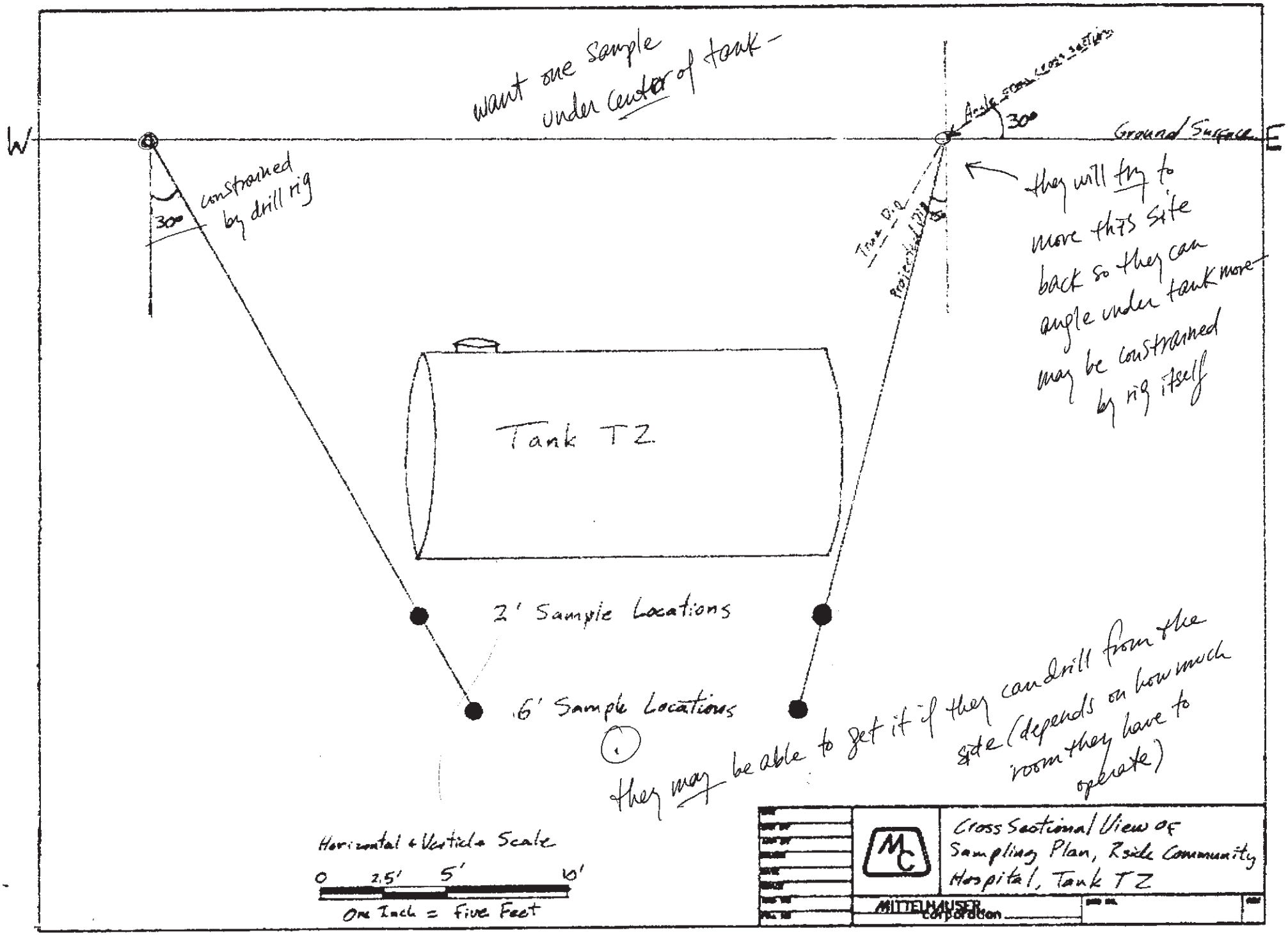
N

TANK DATA

TANK	VOLUME (GALS)	DIMENSIONS (FT)	UPPERMOST LEVEL(FT)	LOWEST LEVEL(FT)
T2	6,000	8 X 17	8.4	16.4
		3	2.8	6.8

8101401E
J. LaTourneau

*Not all below ground facilities may be represented on this map.


want one sample under center of tank -
W
E
Ground Surface
30°
constrained by drill rig
30°
they will try to move this site back so they can angle under tank more may be constrained by rig itself
Tank T2
2' Sample Locations
6' Sample Locations
they may be able to get it if they can drill from the site (depends on how much room they have to operate)
Horizontal & Vertical Scale
0 2.5' 5' 10'
One Inch = Five Feet
Cross Sectional View of Sampling Plan, Rside Community Hospital, Tank T2
MITTELHAUSER Corporation

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

DATE: May 8, 1989 JOB # 1074

TO: Wendy Sheridan

COMPANY: Riverside Co. Dept. of Health
Environmental Division

TELECOPIER (FAX) NO.: 714-358-5349

FROM: Dan Collins

MITTELHAUSER CORPORATION

NUMBER OF PAGES IN THIS TRANSMITTAL,

INCLUDING THE COVER PAGE: 5

IF TRANSMITTAL IS INCOMPLETE, PLEASE CALL:

Debbie Varvato

AT (714) 472-2444
FAX (714) 472-2418

MESSAGE:

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

March 28, 1989

Ms. Wendy Sheridan
Riverside County Dept. of Health
Environmental Division
4065 County Circle Drive
Riverside, CA 92503

Subject: Transmittal of Riverside Community Hospital UGST reports.

Dear Ms. Sheridan:

As per our phone conversation last Monday, I am sending you two Mittelhauser reports on Riverside Community Hospital to acquaint you with the project. Three underground storage tanks have been removed from the site so far, with two remaining to be removed in the future. The removal of the last two UST's is contingent upon the completion of a loading dock at the hospital.

Please feel free to contact myself with any questions you may have regarding the site.

Sincerely,

MITTELHAUSER CORPORATION

Bob Stechmann
Project Geologist

BS:mlp
P1074CD

Enclosures

RECEIVED
MAR 31 1989
HEALTH DEPT.
Environmental Health

UNDERGROUND STORAGE TANK (UGST) LEAK INVESTIGATION

AT THE

RIVERSIDE COMMUNITY HOSPITAL

RIVERSIDE, CALIFORNIA

Prepared for:

RIVERSIDE COUNTY DEPARTMENT OF HEALTH
RIVERSIDE, CALIFORNIA

Prepared by:

MITTELHAUSER CORPORATION
LAGUNA HILLS, CALIFORNIA

OCTOBER 1988

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2.0 SCOPE OF THE INVESTIGATION	3
3.0 SITE GEOLOGY AND HYDROLOGY	8
4.0 ANALYTICAL RESULTS	10
5.0 CONCLUSIONS AND RECOMMENDATIONS	12

APPENDIX A - Proposed Site Assessment Plan

APPENDIX B - Boring Logs

APPENDIX C - Analytical Laboratory Results

APPENDIX D - Tank Integrity Test Results

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TECHNICAL CERTIFICATION STATEMENT

This report presents the results of a limited soil investigation around a leaking underground storage tank at the Riverside Community Hospital. Available information regarding previous investigations at the site, regional and local geology, and hydrogeology were used as the basis for preliminary assessments. Additional information obtained from drilling and testing programs was used to characterize site subsurface conditions.

The data, opinions, conclusions, and recommendations presented herein are, to the best of my knowledge, accurate and complete. Future studies may reveal information which could alter the interpretation of site subsurface conditions. This should be brought to my attention should it occur.

October 28, 1988
Date

REGISTERED GEOLOGIST
DANIEL E. COLLINS
NO. 3751
STATE OF CALIFORNIA

Daniel E. Collins
Daniel E. Collins
Registered Geologist
State of California
No. 3751

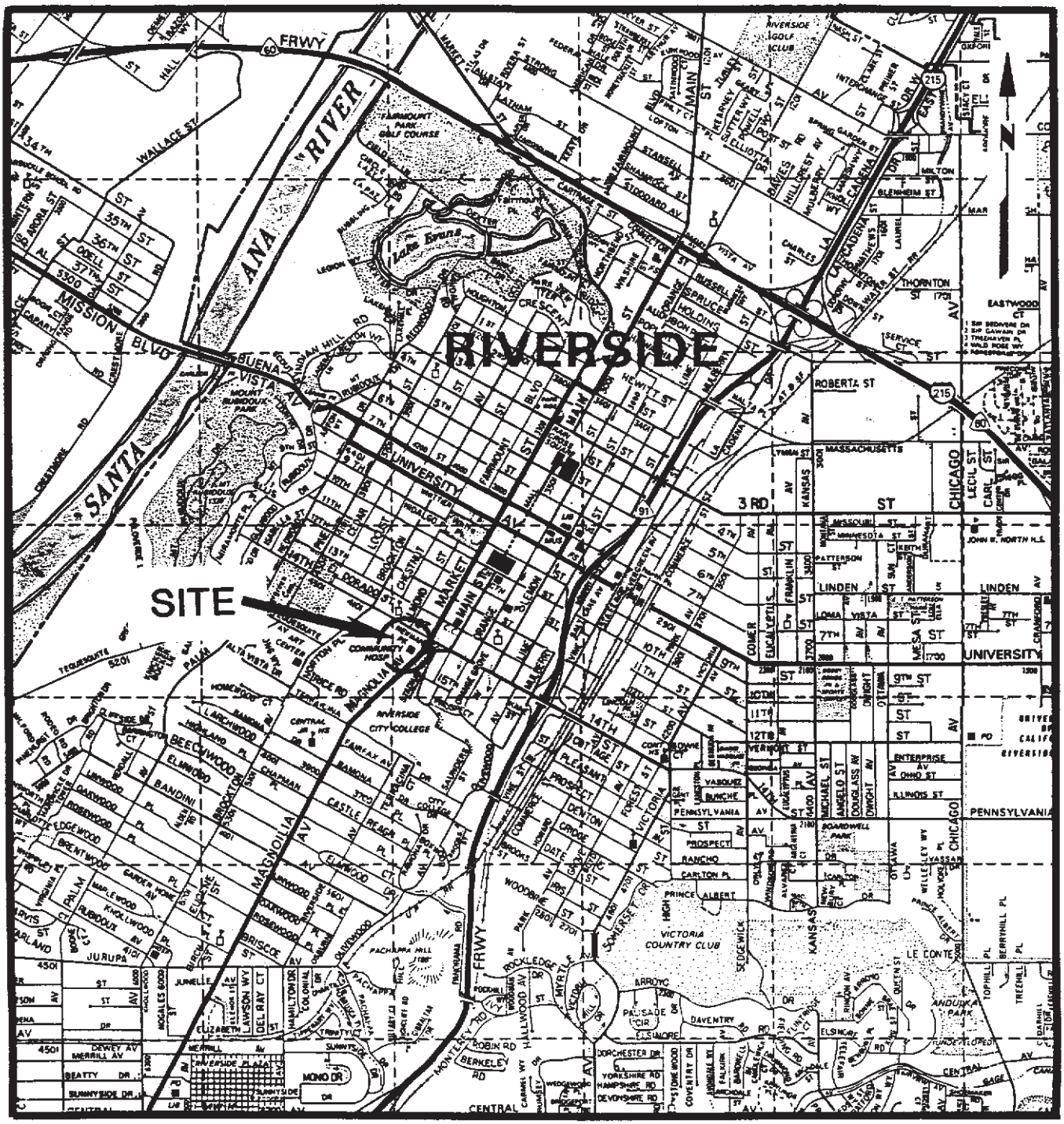
1.0 INTRODUCTION

Mittelhauser Corporation was contracted by Riverside Community Hospital on September 26, 1988 to remove five (5) underground storage tanks (UGSTs) on the property. The hospital is located at 4445 Magnolia Avenue in Riverside, California, as shown on Figure 1. The UGSTs are, or have been, used as fuel storage for emergency generators at the hospital. The capacity and type of fuel stored in each tank is listed below.

CAPACITY (in gallons)	TYPE OF FUEL
550	Leaded gasoline
550	Leaded gasoline
1,000	# 2 diesel
3,000	# 2 diesel
6,000	# 2 diesel

The 6,000-gallon diesel tank is the only tank currently used. After a new 10,000-gallon diesel tank is installed, the existing five tanks are to be removed and disposed of properly. The five tanks were precision tested in 1987, with four of them passing. The tank integrity test results are presented in Appendix D to this report. The 3,000-gallon diesel tank failed the precision test at which time the fuel was removed and the tank triple rinsed.

A subsequent soils investigation performed by Toxguard Systems, Inc. in July 1987, identified that the subsurface soils



SOURCE: MODIFIED FROM PAGES 7 AND 13 OF THE RIVERSIDE COUNTY THOMAS GUIDE.

ENG	RJS
CHK BY	
APP BY	
DRAWN	KYM
DATE	10/88
SCALE	AS SHOWN
CAD NO	10740002
PRJ NO	P1074-02

SITE LOCATION MAP

RIVERSIDE COMMUNITY HOSPITAL

MITTELHAUSER Corporation

DWG NO. FIGURE 1

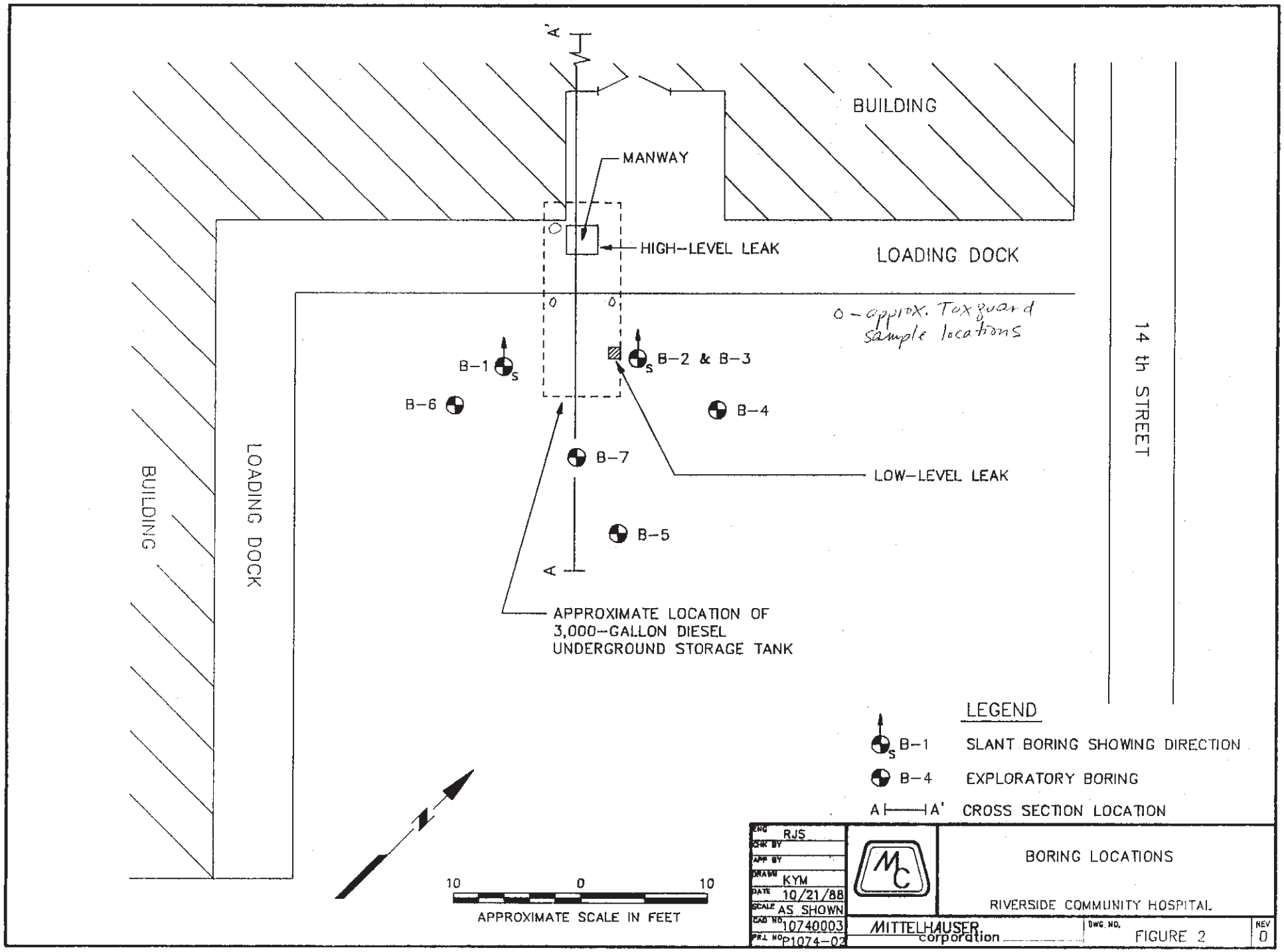
REV

around the tank contained significant levels of diesel contamination. The tank was found to have a high-level leak near the manway. A portion of the tank was exposed in an excavation and a second low-level leak was found on the northwest side of the tank as shown on Figure 2.

Mittelhauser Corporation submitted a proposed Site Assessment Plan to Mr. Joseph Asbury of the Riverside County Health Department on October 12, 1988, to identify the lateral and vertical extent of the diesel contamination associated with the leaky UGST. The Plan was given verbal approval by Mr. Asbury on October 13, 1988. A copy of the Site Assessment Plan is included as Appendix A.

2.0 SCOPE OF THE INVESTIGATION

A limited soil boring program was proposed to characterize the lateral and vertical extent of the soil contamination around the leaking underground storage tank. Mittelhauser Corporation contracted Geosec, of San Bernardino, California, to provide equipment and manpower to complete the soil borings. A truck-mounted Mobile B-53 drill rig using eight-inch OD hollow-stem augers was utilized on October 14, 1988, to complete seven soil borings around the tank. The locations of the borings are shown on Figure 2 and the boring logs are presented in Appendix B.


A'
BUILDING
MANWAY
HIGH-LEVEL LEAK
LOADING DOCK
0 - approx. Texguard sample locations
B-1
B-2 & B-3
B-6
B-4
B-7
LOW-LEVEL LEAK
B-5
A
14 th STREET
BUILDING
LOADING DOCK
APPROXIMATE LOCATION OF 3,000-GALLON DIESEL UNDERGROUND STORAGE TANK
LEGEND
B-1 SLANT BORING SHOWING DIRECTION
B-4 EXPLORATORY BORING
A A' CROSS SECTION LOCATION
10 0 10
APPROXIMATE SCALE IN FEET
ENG RJS
CHK BY
APP BY
DRAWN KYM
DATE 10/21/88
SCALE AS SHOWN
CAD NO. 10740003
PRJ NO P1074-02
BORING LOCATIONS
RIVERSIDE COMMUNITY HOSPITAL
MITTELHAUSER corporation
DWG. NO. FIGURE 2
REV 0

Two of the seven borings, B-1 and B-2, were slant drilled at angles of 33 ° and 27.5 ° from vertical, respectively, to assess the extent of any contamination beneath the loading dock and nearby structure. Boring B-1 was drilled to a vertical depth of 28.1 feet. The bottom of the boring extended 18.3 feet northwest of the surface location shown on Figure 2 (approximately 7 feet beneath the building). Boring B-2 was drilled to 52.3 feet and extended some 16 feet under the building. The depths of the completed borings are shown below:

BORING NUMBER	DRILLED LENGTH (FT)	DEPTH BELOW GROUND SURFACE (FT)
B-1 *	33.5	28.1
B-2 *	59.0	52.3
B-3	61.5	61.5
B-4	26.0	26.0
B-5	26.0	26.0
B-6	21.0	21.0
B-7	21.0	21.0

* Slant borings

In the proposed Site Assessment Plan, groundwater monitoring wells were to be constructed in the completed soil borings. This was based on the understanding that the depth to groundwater beneath the facility was approximately 30 to 40 feet below grade. However, boring B-3 was terminated at the depth of 61.5 feet below grade without encountering groundwater. As a result of the increased depth to groundwater and the fact that no soil contamination was identified below 30 feet, plans to conduct groundwater monitoring at the facility became unwarranted.

Therefore, no groundwater monitoring wells were constructed on-site.

The borings in which soil contamination was identified (B-1, B-2, B-3, and B-7) were each backfilled with a ten-foot plug of Volclay grout placed at the bottom and then filled with "clean" soil cuttings (as determined by OVA readings and odor) which was compacted using the drill rig.

The remaining three borings were backfilled with "clean" soil and compacted using the augers and slide hammer of the drill rig. The augers were spun in reverse allowing the soil to be moved down the borehole. The slide hammer was utilized for compaction purposes. This compaction method usually replaced all of the soil cuttings generated during the drilling of the boring. The surface of the borehole was sealed with asphalt cold patch to the original grade.

Soil samples were obtained utilizing both California-modified and Standard Penetration Test split-spoon samplers with brass liners. Liners were removed from the sampler as soon as possible, the ends covered with aluminum foil and plastic caps, sealed with duct tape, labelled, and placed in a cooler on ice. The soil from a second liner, obtained from the same depth, was placed in glass screw-top jars and allowed to

volatilize. These jars were then analyzed at the termination of each boring with an Organic Vapor Analyzer (OVA) instrument to identify the soil sample which had the highest OVA reading. The OVA (a Foxboro 128GC) was utilized as a screening tool for the determination of which soil samples were submitted for laboratory analysis.

Equipment decontamination procedures were employed to reduce the possibility of cross contamination between borings. The hollow-stem augers used to drill the borings were steam cleaned between each boring. The split-spoon sampler and brass liners were cleaned in an Alconox detergent wash, followed by a rinse with tap water, and lastly by a distilled water rinse prior to each sampling event.

The selected soil samples were submitted to Enseco/CRL Laboratories, in Garden Grove, California (an independent California-certified laboratory) for analysis following proper chain of custody procedures. A copy of the completed chain of custody is included in Appendix C. A discussion of the analytical results is presented in Section 4.0.

3.0 SITE GEOLOGY AND HYDROLOGY

The site is located on a flat, elevated terrace, approximately 825 feet above Mean Sea Level (MSL), cut by the Tequesito Arroyo. The Santa Ana River lies approximately 1.25 miles to the northwest of the hospital. The terrace is composed of unconsolidated alluvial sediments deposited by the Santa Ana River during Quaternary time. A prominent mountain, Mount Rubidoux, rises to 1400 feet above MSL and is located approximately 0.75 miles northwest of the site.

Logs from the seven borings indicate that native soil on the property consist of sandy to clayey silts. The soil is medium brown to reddish brown in color; contains minor amounts of fine-grained sand and fine gravel; is moderately firm, slightly to moderately cohesive; and varies from dry to moist.

The deep borings, B-2 and B-3, encountered a silty sand layer beneath the silty horizon at depths of 42 feet and 45 feet, respectively. The silty sand is reddish to orangish brown, fine- to medium-grained sand with minor fines and fine gravel; is moderately loose, moist; and contains clasts of weathered granite. The lithology of the site is shown on cross section A-A' which is included as Figure 3. The location of the cross section is shown on Figure 2.

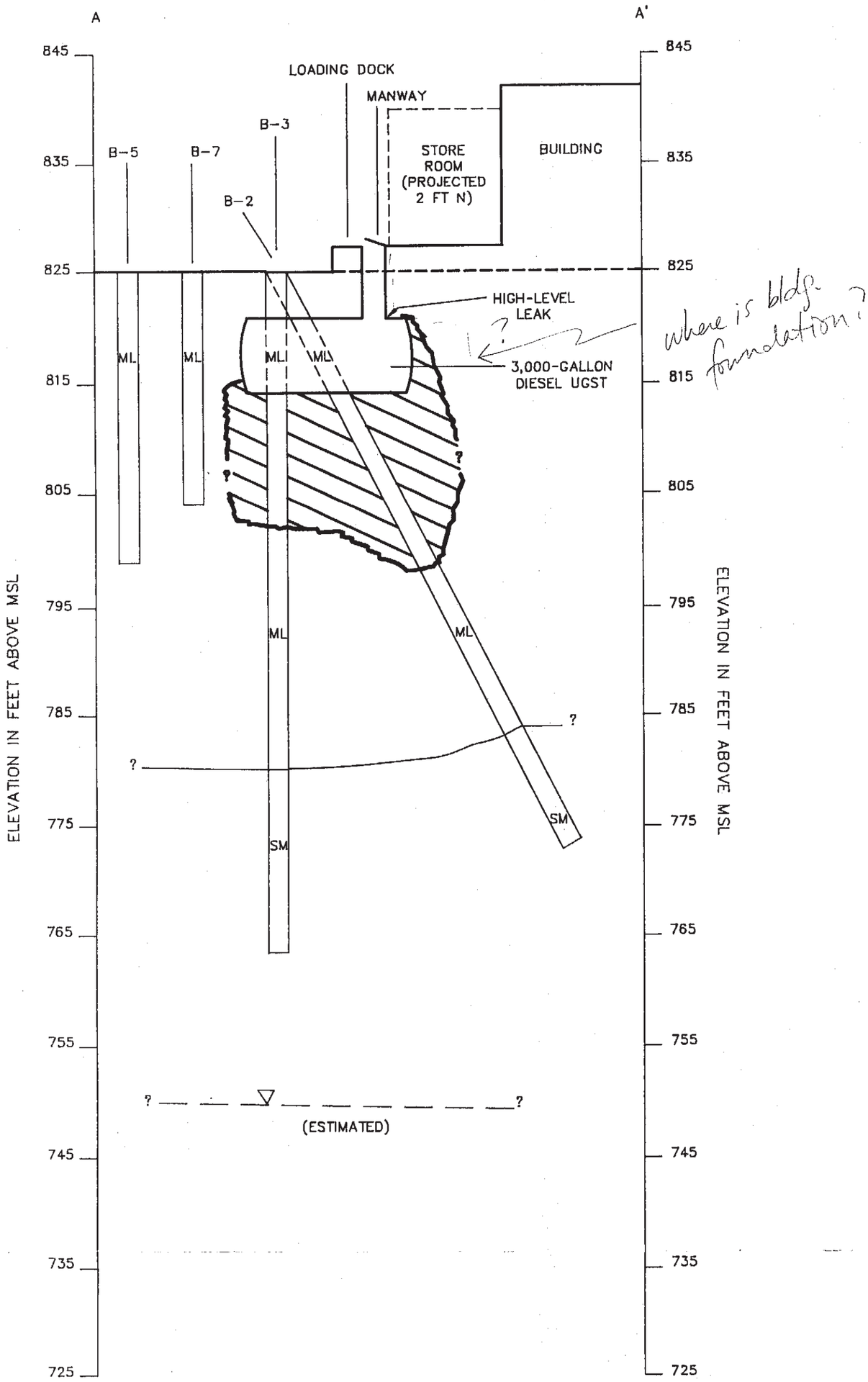
Riverside County
Local Oversight Program
Electronic Case File

Site Name: Riverside Community Hospital

Site Number: 81557

Electronic File #: 2

File organized chronologically starting with #1



EXPLANATION

B-7 EXPLORATORY BORING

ML UNIFIED SOIL CLASSIFICATIONS SYSTEM SYMBOL

GROUNDWATER TABLE (ESTIMATED)

ZONE OF IMPACTED SOILS (ESTIMATED)
(TOTAL PETROLEUM HYDROCARBON LEVELS >1,000 PPM)

NOTE: BORINGS B-2 & B-3 PROJECTED 5 FT SW AND B-5 PROJECTED 3 FT SW INTO SECTION LINE.

SCALE 1"=10'
HORIZONTAL = VERTICAL

ENG. RJS	CROSS SECTION A – A'	
CHK BY		
APP BY		
DRAWN KKM		
DATE 10-24	RIVERSIDE COMMUNITY HOSPITAL	
SCALE 1"=10'		
CAD NO. 10740801	MITTELHAUSER Corporation	DWG NO. FIGURE 3
PRJ. NO. 1074-02		REV 0

Groundwater was not encountered in any of the borings completed at the site. However, based on a review of the topography of the area and second hand information about the depth to groundwater in the vicinity, the first occurrence of groundwater is estimated to be between 70 and 80 feet below the ground surface.

The direction of regional groundwater flow is most likely to the northwest towards the Santa Ana River. Local flow directions, however, could be quite different and can not accurately be predicted without on-site measurements.

4.0 ANALYTICAL RESULTS

The selected soil samples were submitted to Enseco/CRL laboratory, in Garden Grove, California. The laboratory reports and completed chain of custody record are presented in Appendix C. A total of thirteen soil samples from the seven borings were submitted for analyses of total petroleum hydrocarbons using EPA Method 418.1. Table 1 presents the laboratory results of this investigation as well as those obtained by Toxguard during the previous investigation.

The sample depths for slant borings B-1 and B-2 listed on Table 1 are true vertical depths below ground surface. As shown

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
IN PPM (MG/KG)

Sample Number	Sample Location	Total Petroleum Hydrocarbons (EPA Method 418.1)	Total Petroleum Hydrocarbons (EPA Method 8015)
1074-02-001	B-3, 15-16.5'	20,000	---
1074-02-002	B-3, 25-26.5'	150	---
1074-02-003	B-2, 15.5-16.9'	25,000	---
1074-02-004	B-2, 28.8-30.2'	34	---
1074-02-005	B-2, 33.3-34.6'	8	---
1074-02-006	B-1, 14.7-15.5'	17,000	---
1074-02-007	B-1, 18.9-19.7'	7,500	---
1074-02-008	B-1, 23.1-23.9'	22,000	---
1074-02-009	B-1, 27.3-28.1'	15	---
1074-02-010	B-5, 27.5-29'	8	---
1074-02-011	B-4, 20-21'	10	---
1074-02-012	B-6, 15-16'	ND	---
1074-02-013	B-7, 20-21'	ND	---
* #2	N/A ?	19,800	---
* #4	N/A	20,500	---
* #6	N/A	15,200	---
* E-2 ft	East wall	---	ND
* E-6 ft	East wall	---	ND
* W-2 ft	West wall	---	ND
* W-6 ft	West wall	---	ND
* N-W-2 ft	Northwest wall	---	ND
* N-W-6 ft	Northwest wall	---	ND

this info from Toxguard (they were "thrown off" the job - from Bob Steckmann, Mittelhauser)

left message for Dennis Zafuto w/Lorraine 4-12-89, 2:20pm - will get back to me re: location info on these spls

- Dennis called back 4-12-89 2:30 pm - he will find spl. locs.

- called Dennis Zafuto 8:35am - left message - he called back 10am - couldn't find his plot plan - gave approx. loc. of spls (see Fig. 2)

Note: Sample depths of slant borings B-1 and B-2 are corrected for true vertical depth.

--- Analysis not performed

ND - Non detected

N/A - Not Available

* Analyses performed during Toxguard Investigation by AnaCon Labs. No records of exact sample locations or detection limits.

Detection Limits: Enseco/CRL (EPA Method 418.1) Soil= 1.0 mg/kg (ppm)

on this table, soil samples from borings B-1, B-2, and B-3 show elevated concentrations (up to 25,000 ppm) of total petroleum hydrocarbons (TPH) present in the soil. The zone of contamination (TPH concentrations >1,000 ppm) in boring B-1 appears to extend from 13 feet to 26 feet below ground surface. In boring B-2, contaminated soils were encountered from 12 feet to 27 feet in depth. The zone of contamination was found to be from 10 feet to 23 feet in boring B-3. Cross section A-A' (Figure 3) shows the location of the UGST and the estimated impacted soil zone.

The remaining four borings, B-4, B-5, B-6, and B-7, encountered only minor concentrations of TPH (10 ppm). These borings were drilled around the tank (a maximum of 11 feet away) as shown on Figure 2. Given the close proximity of these borings, the contaminated zone appears to be confined to a limited area around the tank.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The Department of Health Service's Leaking Underground Fuel Tank (LUFT) Manual is the regulatory guideline which applies to this site. The LUFT Manual contains a rationale to determine appropriate cleanup levels for soil and groundwater impacted by leaking UGSTs. Various factors, including the depth to groundwater, type of fuel stored in the UGST, annual rainfall, and

geologic and man-made conditions present, are used to calculate these cleanup levels.

Table 2 presents the cleanup level calculation worksheet (from the LUFT Manual) for the site. As shown on the table, a total of 48 points, indicating a cleanup level of 1,000 ppm TPH, is calculated for the site. However, it should be noted that a 10,000 ppm TPH cleanup level is acceptable for sites which total 49 points or more. 48 CLOSE ENOUGH TO 10,000 LEVEL

As shown on Figures 2 and 3, the UGST is located partially beneath a concrete loading dock and extends approximately two feet under the corner of a Storage Room (constructed after the tank was installed). Laboratory results indicate that there are concentrations of TPH in the soil around the tank, above the calculated cleanup level. Under normal circumstances, the UGST and all contaminated soil with concentrations of TPH above the cleanup value should be excavated and disposed of properly. However, because the UGST and contaminated soil are situated beneath the loading dock and building, excavation and removal becomes a delicate, complicated, if not impossible situation. The excavation and removal of all of the contaminated soil is not economically feasible due to the extensive shoring and excavation techniques which would be required to maintain the integrity of the hospital building.

TABLE 2

LUFT MANUAL CLEANUP LEVEL WORKSHEET

Leaching Potential Analysis for Diesel Using Total Petroleum Hydrocarbons(TPH) and Benzene, Toluene, Xylene and Ethylbenzene (BTX&E)

The following table was designed to permit estimating the concentrations of TPH and BTX&E that can be left in place without threatening ground water. Three levels of TPH and BTX&E concentrations were derived (from modeling) for sites which fall into catagories of low, medium or high leaching potential. To use the table, find the appropriate description for each of the features. Score each feature using the weighting system shown at the top of each column. Sum the points for each column and total them. Match the total points to the allowable BTX&E and TPH levels.

SITE FEATURE	SCORE	SCORE 10 PTS IF CONDITION IS MET	SCORE	SCORE 9 PTS IF CONDITION IS MET	SCORE	SCORE 5 PTS IF CONDITION IS MET
Minimum Depth to Ground Water from the Soil Sample (feet)		>100	9	51-100		25-50\1
Fractures in subsurface (applies to foothills or mountain areas)	10	None		Unknown		Present
Average Annual Precipitation (inches)		<10	9	10-25		26-40\2
Man-made conduits which increase vertical migration of leachate	10	None		Unknown		Present
Unique site features: recharge area, coarse soil, nearby wells, etc	10	None		At least one		More than one
COLUMN TOTALS-TOTAL PTS	30	+	18	+	0	= 48
RANGE OF TOTAL POINTS	49pts or more		41 - 48 pts		40pts or less	
MAXIMUM ALLOWABLE B/T/X/E LEVELS (PPM)	1/50/50/50		.3/.3/1/1		NA\3	
MAXIMUM ALLOWABLE TPH LEVELS (PPM)	10000		1000		100	

\1 If depth is greater than 5 ft. but less than 25 ft., score 0 points. If depth is 5 ft. or less, this table should not be used.
\2 If precipitation is over 40 inches, score 0 points.
\3 Levels for BTX&E are not applicable at a TPH concentration of 100ppm

SOURCE: Table 2-2, page 28 of the Leaking Underground Fuel Tank (LUFT) Manual California Department of Health Services, May 1988

The zone of contaminated soil (TPH concentrations above 1,000 ppm) is estimated to be approximately 20 feet wide by 20 feet long and extending from 6 feet to 25 feet below grade centered around the UGST. This calculates to a volume of 275 cubic yards of contaminated soil, most of which underlies the building and loading dock as shown on Figure 3.

Mittelhauser Corporation recommends that the leaking 3,000-gallon diesel tank be excavated and removed. Contaminated soil with concentrations of TPH greater than 1,000 ppm found beneath the asphalt should be excavated and disposed of properly. Shoring of the excavation wall next to the Storage Room will be required to safely remove the UGST. After the tank is removed, a backhoe is proposed to be used to remove as much of the contaminated soil adjacent to the building as possible without compromising the structural integrity of the nearby buildings. No soil is proposed to be excavated beneath the buildings. The excavation will be filled with compacted gravel and the loading dock and asphalt receiving areas restored to their original condition.

WHAT ABOUT PG 13 FEASIBE

The UGST and a large portion of the contaminated soil would be removed using this proposed method. The remaining contaminated soil would be covered by the concrete loading dock which would prevent the percolation of rainwater and the potential

downward and lateral migration of TPH constituents in the vadose zone. The groundwater table is estimated to be some 50 feet below the bottom of the contaminated zone. The soil in the contaminated zone is a clayey silt to a silty clay. Approximately 20 feet of clean clayey silt underlies the bottom of the contaminated zone. Given the thickness and the estimated low permeability of the clayey soil, the diesel contamination under the building is not believed to pose a threat to groundwater in the area.

Mittelhauser Corporation and Riverside Community Hospital believe that this proposed method will provide the most cost-effective solution to minimize the potential environmental problems from the leaking UGST.

APPENDIX A

PROPOSED SITE ASSESSMENT PLAN

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

October 12, 1988

Mr. Joe Asbury
Riverside County Department of Health
Toxics Division
3636 University Avenue
Riverside, California 92501

Subject: Riverside Community Hospital- Proposed Site Assessment Plan

Dear Joe:

Mittelhauser Corporation was contracted by the Riverside Community Hospital to remove five underground storage tanks on the facility. The tank capacities and type of fuel stored in each are shown below:

Tank Volume (in gallons)	Type of Fuel Stored
550	Leaded gasoline
1,000	Leaded gasoline
1,000	# 2 diesel
3,000	# 2 diesel
6,000	# 2 diesel

All of the tanks have been precision tested, with four of them passing. The 3,000-gallon diesel tank failed the precision test and a subsequent soils investigation performed by Toxguard Systems, Inc. in July, 1987, identified that the subsurface soils around the tank contained significant levels of diesel contamination. The tank was found to have a high level leak near the manway and a second leak on the west side of tank approximately four feet north of the loading dock as shown on Figure 1.

PROPOSED SCOPE OF WORK

Prior to removing any of the tanks, the leaking diesel tank will be investigated. A site assessment plan will be implemented to determine the lateral and vertical extent of the diesel plume in the vadose zone soils and groundwater aquifer (if contaminated). This assessment will consist of a series of soil borings and the construction of monitoring wells (if contamination is found in or near the water table). Mittelhauser proposes to drill six borings around the tank as shown on Figure 1.

Two of these borings (B-1 and B-2) will be slant-drilled to assess the extent of any contaminated soils underlying the building. The third boring (B-3) will be drilled vertically as close as possible to the tank in the area of the second leak. A temporary monitoring well will be installed in this boring to assess the potential for groundwater contamination. The remaining three borings (B-4, B-5, and B-6) are located around the tank to characterize the extent of the plume. These borings will be drilled vertically. If diesel contamination is identified in borings B-4, B-5, and B-6, additional borings will be performed to further characterize the plume. Riverside County Health Department will be consulted prior to drilling any additional borings.

SAMPLING AND ANALYSIS PLAN

The borings will be drilled using a truck-mounted Mobile B-53 drill rig using eight-inch OD hollow-stem augers. Geosec, of San Bernardino, is to be contracted to perform the drilling. The borings will be drilled ten feet into the groundwater table. The estimated depth to groundwater beneath the site is 30 to 40 feet. Samples will be obtained using a California modified split-spoon sampler equipped with brass liners. A Mittelhauser Corporation geologist will supervise all drilling operations and log the borings. The sampling intervals will be dependent on the conditions encountered in each boring. The minimum sampling interval will be five feet. Discrete, individual samples will be taken to assess both the maximum contaminant concentration as well as the "clean" soil boundary. No compositing of samples will be performed. A minimum of one sample per boring will be submitted for laboratory analysis.

Soil cuttings from the borings will be drummed in DOT approved 55-gallon drums. Any soils determined to be hazardous under state law will be disposed of at an appropriate facility. The regulations of Rule 1166, passed by the South Coast Air Quality Management District, will be followed during this investigation.

All sampling will be conducted in accordance with EPA-approved methods listed in EPA publication SW-846. Proper equipment decontamination procedures and sample chain of custody requirements will be strictly followed. Soil and groundwater samples are to be analyzed for total petroleum hydrocarbons by EPA Method 418.1. Previous analyses were performed using Method 8015 and none of these parameters were detected. An independent California-certified laboratory, Enseco/CRL in Garden Grove, will perform the analyses.

A Foxboro Model 128 Organic Vapor Analyzer (OVA) will be used to screen the soil and groundwater samples for the presence of petroleum hydrocarbons. The OVA will also be utilized

for health and safety purposes to monitor the breathing space of the drill crew.

Monitoring wells will be constructed in accordance with EPA-approved methods listed in the EPA RCRA Ground Water Monitoring Technical Enforcement Guidance Document. Wells will be constructed using two-inch ID PVC Sch 40 flush-threaded well casing and 0.020-inch screen. Monterey No. 3 silica sand will be used for the filter pack. Bentonite pellets are to be utilized to form the two-foot impermeable seal. Volclay grout will be used above the bentonite to grade level to seal the annulus. The wells are to be completed at grade level with flush, locking traffic boxes.

CONCLUSIONS

Mittelhauser Corporation and Riverside Community Hospital wish to identify and mitigate any potential problems with this leaking underground storage tank as soon as possible. The hospital is currently undergoing renovations and the receiving dock near this tank is to be used heavily in the future. We wish to fully cooperate with the Riverside County Health Department and any other regulatory agencies to insure the timely, cost-effective remediation of this problem.

We apologize for the late notice of this submittal. The drilling activities for this assessment are scheduled to begin at 8:30 am on Friday, October 14, 1988. In the future, more suitable notice shall be given prior to initiating work. Thank you very much for your assistance and understanding on this matter. If you have any questions or comments please call me at (714) 472-2444.

Sincerely,

MITTELHAUSER CORPORATION

Robert J. Stechmann, Jr.

Robert J. Stechmann, Jr.
Project Geologist

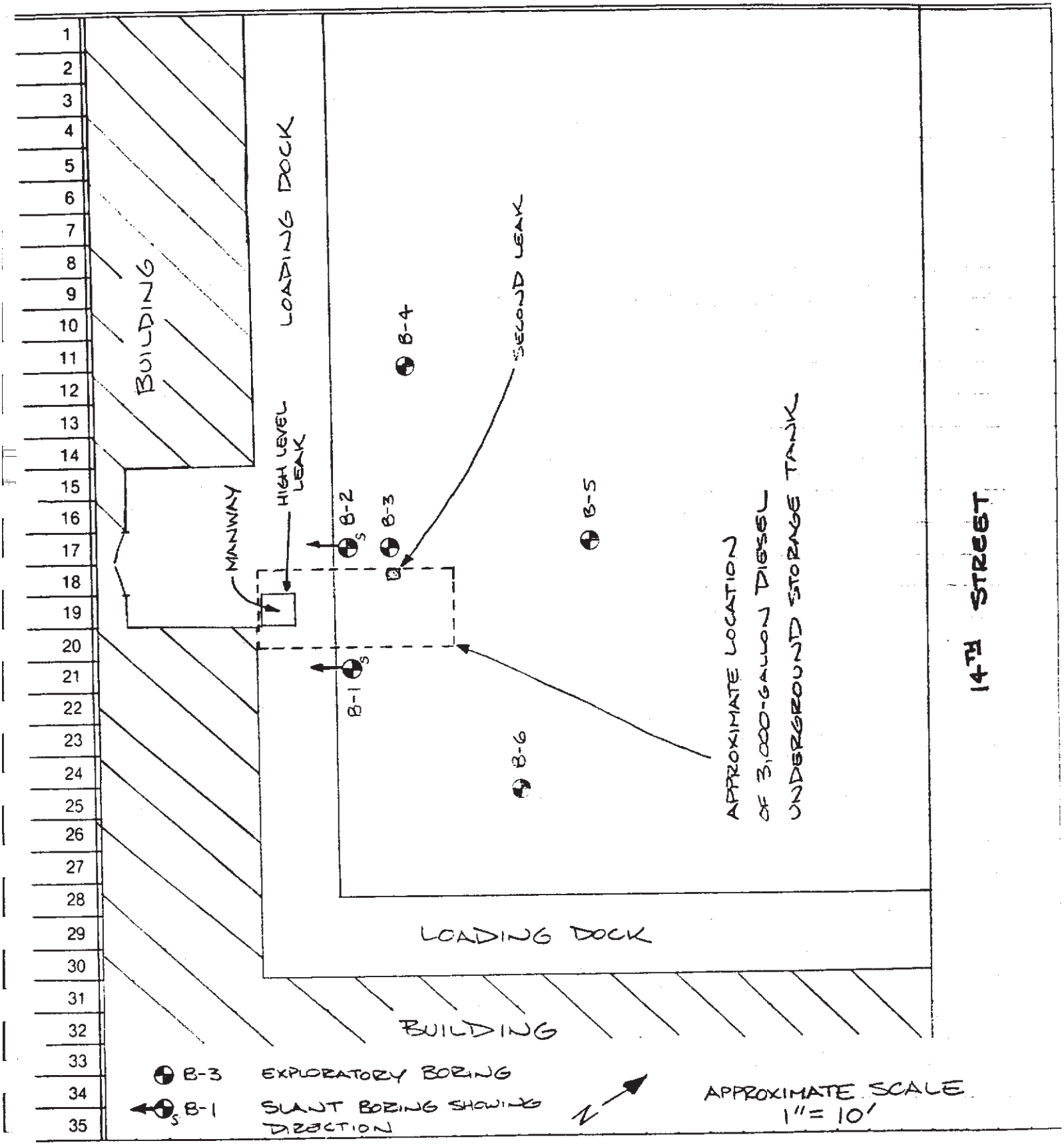
RJS:ld
1074BA
Enclosure: Figure 1-Proposed Boring Locations

cc: Earl Huckins, Riverside Community Hospital
David Adams, Riverside Community Hospital

MITTELHAUSER corporation

SHEET NO. 1 OF 1
PROJECT 1074-02
DATE 10/12/88
BY RJS CKD

PROPOSED BORING LOCATIONS
RIVERSIDE COMMUNITY HOSPITAL



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APPENDIX B

BORING LOGS

MITTELHAUSER corporation

BORING NO.: B-1	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 5.5' from loading dock, 3' S of tank C.L		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1348	DATE & TIME FINISHED: 10/14/88 1425
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 33.5 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 6		

DRILLED LENGTH (FT)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING WITH SOIL CUTTINGS				1348
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines						
5	**0.7-12.0' SANDY SILT (ML)**- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.		BACKFILLED	1		9/10	1354 7.5-8.5' OVA= 0 ppm
10	**12.0-34.0' CLAYEY SILT (ML)**- Med. brown to olive, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.			2		12/14	1400 12.5-13.5' OVA= 1.4 ppm
15	@ 17.5' same as above. Slight hydrocarbon odor noted.	ML		3		12/17	1405 17.5-18.5' OVA~ 65 ppm
20	@ 22.5' same as above. Slight to moderate hydrocarbon odor detected.			4		10/11	1409 22.5-23.5' OVA= 150 ppm
25			GROUT				
	@ 27.5' same as above. Slight to moderate hydrocarbon odor detected.			5		11/12	1418 27.5-28.5' OVA~ 120 ppm
30							
	@ 32.5' same as above. No hydrocarbon odor found.			6		13/18	1425 32.5-33.5' OVA~ 3 ppm
35	T.D. = 33.5' @ 1425						
	Boring backfilled by placing 25 gallons of Volclay grout from 23.5						
40	to 33.5 ft and then clean soil cuttings compacted to grade level. Surface patched w/ asphalt.						
	NOTE- THIS BORING WAS SLANT DRILLED						
45	AT AN ANGLE OF 33 DEGREES FROM VERTICAL. DEPTHS LISTED ON LOG ARE NOT CORRECTED FOR ACTUAL VERTICAL DEPTH.						
50							

MITTELHAUSER corporation

BORING NO.: B-2	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 5' from loading dock, 1.5' NE of tank		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1115	DATE & TIME FINISHED: 10/14/88 1300
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 59.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 9		

DRILLED LENGTH (FT)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING SOIL CONTINUES				1115
	0.25-0.7' **ARTIFICIAL FILL**- Gravel (AB), minor fines						
5	**0.7-47.5' CLAYEY SILT (ML)**- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected from 0.7 to 12.5'.			1		10/12/13	1126 7.5-9.0' OVA= 0 ppm
10	@ 12.5' micaceous, grading sandier. Slight hydrocarbon odor.			2		8/9/14	1128 12.5-14.0' OVA= 56 ppm
15	@ 17.5' same as above. Moderate hydrocarbon odor noted.			3		10/10/12	1134 17.5-19.0' OVA= 180 ppm
20	@ 22.5' same as above. Moderate hydrocarbon odor detected.	ML		4		6/7/9	1139 22.5-24.0' OVA= 175 ppm
25	@ 27.5' same as above. Slight to moderate hydrocarbon odor detected.			5		10/12/15	1144 27.5-29.0' OVA~ 170 ppm
30	@ 32.5' same as above. Slight hydrocarbon odor found.			6		5/6/7	1148 32.5-34.0' OVA~ 100 ppm
35	@ 37.5' same as above, grading finer (more clay). No hydrocarbon odor detected in sample.			7		7/8/9	1154 37.5-39.0' OVA~ 5 ppm
40							
45	**47.5-59.0' SILTY SAND (SM)**- Reddish brown, fine to medium grained sand, minor fines and fine gravel, moist, moderately loose, chunks of	SM		8		7/12/17	1210 47.5-49.0' OVA~ 1 ppm
50							

MITTELHAUSER corporation

BORING NO.: B-2 PROJECT NO.: 1074-02 PROJECT NAME: Riverside Community Hospital-UGST Inv.

DRILLED LENGTH (FT)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	weathered granite. No hydrocarbon odor detected.						
55		SM	GROUT				
	@ 57.5' same as above.			9		7/11/16	1227 57.5-59.0' OVA= 1 ppm
60	T.D. = 59.0 ft @ 1227						
	Boring backfilled by placing 25 gallons of Volclay grout from 49.0 to 59.0 ft and then clean soil cuttings compacted to grade level. Surface patched w/ asphalt.						
65							
	NOTE- THIS BORING WAS SLANT DRILLED AT AN ANGLE OF 27.5 DEGREES FROM VERTICAL. DEPTHS LISTED ON LOG ARE NOT CORRECTED FOR ACTUAL VERTICAL DEPTH.						
70							
75							
80							
85							
90							
95							
100							

MITTELHAUSER corporation

BORING NO.: B-3	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 5' from loading dock, 1.5' NE of tank		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 0850	DATE & TIME FINISHED: 10/14/88 1020
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 61.5 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 15		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	TYPE	BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING SOIL CUTTINGS WITH				0850
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines			1		1/1/1	0853 4.5-6.0' OVA= 6 ppm
5	**0.7-45.0' CLAYEY SILT (ML)-** Med. reddish brown, minor fine-grained sand, some gravel, moderately firm, slightly cohesive, dry to moist			2		2/4/7	0902 7.5-9.0' OVA= 28 ppm
10	Moderate hydrocarbon odor from 4.5 to 8.0'. @ 8.0' more moist, grading sandier. Stronger hydrocarbon odor.			3		6/9/12	0906 10.0-11.5' OVA= 56 ppm
	@ 10' dry, friable, slightly indurated			4		4/7/10	0910 12.5-14.0' OVA= 95 ppm
15	@ 12.5' grading sandier. @ 17.5' same as above. Diminishing hydrocarbon odor noted.			5		3/7/10	0914 15.0-16.5' OVA~ 100 ppm
20	Sandy silt lens from 19 to 22'	ML		6		5/8/10	0918 17.5-19.0' OVA~ 55 ppm
	@ 22' silty clay encountered. Driller notes harder drilling.			7		5/7/8	0922 20.0-21.5' OVA= 42 ppm
25				8		3/4/7	0924 25.0-26.5' OVA= 8.2 ppm
30	@ 30' same as above. No hydrocarbon odor.			9		5/6/8	0927 30.0-31.5' OVA= 2 ppm
35	@ 35' same as above. No hydrocarbon odor.			10		3/4/5	0931 35.0-36.5' OVA~ 1 ppm
40	@ 40' same as above, no odor, grading sandier.			11		5/5/6	0938 40.0-41.5' OVA~ 1 ppm
45	**45.0-61.5 SILTY SAND (SM)-** Reddish brown with some orange, fine to medium grained sand, minor fines and fine gravel, dry to moist, mod. loose, chunks of weathered granite.	SM		12		6/7/9	0943 45.0-46.5' OVA~ 1 ppm
50	No hydrocarbon odor detected.			13		6/8/11	0947

MITTELHAUSER corporation

BORING NO.: B-3 PROJECT NO.: 1074-02 PROJECT NAME: Riverside Community Hospital-UGST Inv.

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
			GROUT				50.0-51.5' OVA~ 1 ppm
55	@ 55' same as above, grading coarser.	SM		14		8/9/13	0950 55.0-56.5' OVA~ 1 ppm
60	@ 60' same as above, coarser grained.			15		9/15/20	0955 60.0-61.5' OVA~ 1 ppm
	T.D. = 61.5 ft @ 1227						
65	Boring backfilled by placing 25 gallons of Volclay grout from 50.0 to 61.5 ft and then clean soil cuttings compacted to grade level. Surface patched w/ asphalt.						
70							
75							
80							
85							
90							
95							
100							

MITTELHAUSER corporation

BORING NO.: B-4	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 9' from loading dock, 8' SE of tank		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1548	DATE & TIME FINISHED: 10/14/88 1625
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 26.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 4		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING WITH SOIL CUTTINGS				1548
	0.25-0.7' **ARTIFICIAL FILL**- Gravel (AB), minor fines						
5							
	0.7-12.0' SANDY SILT (ML)- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.		BACKFILLED				
10				1		8/10	1552 10.0-11.0' OVA~ 1 ppm
	12.0-26.5' CLAYEY SILT (ML)- Med. brown to olive, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.	ML					
15				2		7/8	1557 15.0-16.0' OVA~ 1 ppm
20	@ 20' same as above. No odor detected.			3		8/8	1602 20.0-21.0' OVA~ 1.5 ppm
25	@ 25' same as above. No odor identified.			4		8/11	1608 25.0-26.0' OVA= 3 ppm
	T.D. = 26.0' @ 1610						
30	Boring backfilled with clean soil cuttings and compacted w/ drill rig. Surface patched w/ asphalt.						
35							
40							
45							
50							

MITTELHAUSER corporation

BORING NO.: B-5	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 23' from loading dock, 0.5' N of tank		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1510	DATE & TIME FINISHED: 10/14/88 1540
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 26.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 4		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING BACKFILLED WITH SOIL CUTTINGS				1510
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines						
5	**0.7-12.0' SANDY SILT (ML)-** Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.						
10				1		7/8	1515 10.0-11.0' OVA~ 0 ppm
	12.0-26.5' CLAYEY SILT (ML)- Med. brown, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.	ML					
15				2		8/8	1523 15.0-16.0' OVA~ 0.5 ppm
20	@ 20' same as above. No odor detected.			3		8/9	1530 20.0-21.0' OVA~ 1.5 ppm
25	@ 25' same as above. No odor identified.			4		7/10	1535 25.0-26.0' OVA= 1.7 ppm
	T.D. = 26.0' @ 1540						
30	Boring backfilled with clean soil cuttings and compacted w/ drill rig. Surface patched w/ asphalt.						
35							
40							
45							
50							

MITTELHAUSER corporation

BORING NO.: B-6	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 8.5' from loading dock, 10' from tank C.L.		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1618	DATE & TIME FINISHED: 10/14/88 1640
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 21.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 3		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING BACKFILLED				1618
	0.25-0.7' **ARTIFICIAL FILL**- Gravel (AB), minor fines		WITH SOIL CUTTINGS				
5	**0.7-12.0' SANDY SILT (ML)**- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.	ML		1		5/6	1626 10.0-11.0' OVA~ 1 ppm
10	**12.0-21.0' CLAYEY SILT (ML)**- Med. brown, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.			2		6/6	1628 15.0-16.0' OVA~ 1 ppm
15							
20	@ 20' same as above. No odor detected.			3		6/5	1631 20.0-21.0' OVA~ 1 ppm
	T.D. = 21.0' @ 1631						
25	Boring backfilled with clean soil cuttings and compacted w/ drill rig. Surface patched w/ asphalt.						
30							
35							
40							
45							
50							

MITTELHAUSER corporation

BORING NO.: B-7	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 4.5' from end of tank, 12' from load dock		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1641	DATE & TIME FINISHED: 10/14/88 1700
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 21.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 2		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT						1641
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines						
5	**0.7-12.0' SANDY SILT (ML)-** Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.	ML	GROUT				
10							
	12.0-21.0' CLAYEY SILT (ML)- Med. brown, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.						
15				1		4/5	1643 15.0-16.0' OVA~ 1 ppm
20	@ 20' same as above. No odor detected.			2		6/6	1650 20.0-21.0' OVA~ 1 ppm
	T.D. = 21.0' @ 1650						
25	Boring backfilled with 25 gallons of Volclay grout tremied from 1 to 21 feet. Clean soil placed from 0.5 to 1 feet. Surface patched with asphalt.						
30							
35							
40							
45							
50							

APPENDIX C

ANALYTICAL LABORATORY RESULTS

MITTELHAUSER corporation

UGST Leak Investigation
Riverside Community
Hospital

October 1988
Rev: 0
1074RB

ENSECO/CRL LABORATORY RESULTS

SUBMITTED BY MITTELHAUSER CORPORATION

1074-02
DATA FILE

Enseco

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

October 25, 1988

MITTELHAUSER CORPORATION
23272 Mill Creek Road., Ste. 300
Laguna Hills, CA 92653
ATTN: Mr. Bob Stechmann

ANALYSIS NO.: 829101-001/013
ANALYSES: EPA Method 418.1
DATE SAMPLED: 10/14/88
DATE SAMPLE REC'D: 10/17/88
PROJECT: Riverside Community Hospital #1074-02

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: 829101-001/013 shown above.

The samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Solid samples are reported on an "as received" basis.

Results were faxed October 21, 1988 at 4:45 P.M. to Mr. Bob Stechmann.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED

APPROVED

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

MITTELHAUSER CORPORATION
23272 Mill Creek Road., Ste. 300
Laguna Hills, CA 92653
ATTN: Mr. Bob Stechmann

ANALYSIS NO.: 829101-001/013
ANALYSES: EPA Method 418.1
DATE SAMPLED: 10/14/88
DATE SAMPLE REC'D: 10/17/88
DATE ANALYZED: 10/21/88
SAMPLE TYPE: Solid
PROJECT: Riverside Community Hospital #1074-02

SAMPLE IDENTIFICATION	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS EPA Method 418.1 (mg/kg)
1074-02-001	20,000.
1074-02-002	150.
1074-02-003	25,000.
1074-02-004	34.
1074-02-005	8.
1074-02-006	17,000.
1074-02-007	7,500.
1074-02-008	22,000.
1074-02-009	15.
1074-02-010	8.
1074-02-011	10.
1074-02-012	ND(1.)
1074-02-013	ND(1.)

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

MITTELHAUSER CORPORATION
23272 Mill Creek Road., Ste. 300
Laguna Hills, CA 92653
ATTN: Mr. Bob Stechmann

ANALYSIS NO.: 829101-001/013
ANALYSES: EPA Method 418.1
DATE SAMPLED: 10/14/88
DATE SAMPLE REC'D: 10/17/88
SAMPLE TYPE: Solid
PROJECT: Riverside Community Hospital #1074-02

QA/QC SUMMARY

Date	Parameter(method)	Average Spike Recovery%	Acceptable Range%	Relative Percent Difference	Acceptable Range%
10/21/88	Total Recoverable Petroleum Hydrocarbons (EPA 418.1)	92	75-124	9	28

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MITTELHAUSER corporation
23272 MILL CREEK ROAD, SUITE 300
LAGUNA HILLS, CALIFORNIA 92653
(714) 472-2444

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 1074-02

PROJECT NAME: Riverside Community Hospital

SAMPLED BY: (PRINTED AND SIGNATURE) Bob Stechmann / Bob Stechmann

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): EPA METHOD 418.1						PRESERVATIVE	REMARKS
1074-02-001	10/14/88		SOIL	B-3, S-5 15-16.5'	1	X						ICE	
1074-02-002				B-3, S-8 25-26.5'	1	X							
1074-02-003				B-2, S-3 17.5-19'	1	X							
1074-02-004				B-2 S-6 32.5-34'	1	X							
1074-02-005		1134		B-2, S-7 37.5-39'	1	X							
1074-02-006		1405		B-1, S-3 17.5-19'	1	X							PLEASE INCLUDE
1074-02-007		1409		B-1, S-4 22.5-23.5'	1	X							WHITE COPY OF
1074-02-008		1418		B-1, S-5 27.5-29'	1	X							THIS RECORD
1074-02-009		1425		B-1, S-6 32.5-33.5'	1	X							W/ LAB REPORT
1074-02-010		1530		B-5, S-3 20-21'	1	X							
1074-02-011		1602		B-4, S-3 20-21'	1	X							
1074-02-012		1628		B-6, S-2 15-16'	1	X							INVOICE PROJECT
1074-02-013		1650		B-7, S-2 20-21'	1	X							#1074-02 AND
													P.O.# 286-1074-02-03

RELINQUISHED BY: (SIGNATURE) Bob Stechmann	DATE 10/17/88	TIME 0955	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT) 13	LABORATORY: ENSECO/CRL
				TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 13	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: FEROL KIMBLE	LABORATORY PHONE NUMBER: (714) 898-6370
RELINQUISHED BY: (SIGNATURE)	DATE 10/17/88	TIME 0955	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO	

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
CANARY, LABORATORY
PINK, CLIENT
GOLD, PROJECT FILE

REMARKS: PLEASE CONTACT BOB STECHMANN @ (714) 472-2444 W/ VERBAL RESULTS ASAP.

MITTELHAUSER corporation

UGST Leak Investigation
Riverside Community
Hospital

October 1988
Rev: 0
1074RB

ANACON LABS LABORATORY RESULTS

SUBMITTED BY TOXGUARD SYSTEMS, INC.

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-8724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 26, 1987

LAB NO. 7-09-30-752
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample # 2

SAMPLE POINT: Riverside Community Hospi

FLOW RATE: .....

TIME: Date Received 9/30/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis	
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	19,800	mg/Kg

Additional testing performed 10/16/87 per Dennis Zafuto request for Riverside Environmental Health.

Note: All G.C. Result Performed by Weck Laboratories.

ANALYST

LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes EPA

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
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713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 26, 1987

LAB NO. 7-09-30-754
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil # 4

SAMPLE POINT: Riverside Comunity Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	20,500 mg/Kg

Note: All G.C. Results Performed by Weck Laboratories.

Mike Sandoz
ANALYST

Bruce Klingler
LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes EPA

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9728

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 26, 1987

LAB NO. 7-09-30-756
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil # 6

SAMPLE POINT: Riverside Comunity Hospital

FLOW RATE: .....

TIME: Date Received 9/20/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	15,200 mg/Kg

Note: All G.C. Results Performed by Weck Laboratories.

Mike Sindlin
ANALYST

Bruce Klingler
LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes EPA

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 13, 1987

OCT 16 1987

LAB NO. 7-09-30-755
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample E-2 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Jim Hitchcock
ANALYST

SW

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 1 6 1987

October 13, 1987

LAB NO. 7-09-30-754

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample E-6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Pitchers
ANALYST

SW

LABORATORY DIRECTOR

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AnaCon Labs

PLATING SOLUTION ANALYSIS
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Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 16 1987

October 13, 1987

LAB NO. 7-09-30-756

PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample W-2 Ft

SAMPLE POINT: Riverside Community Hospital
4445 Magnolia Ave.

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Hamm
ANALYST

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs

PLATING SOLUTION ANALYSIS
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Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 13, 1987

OCT. 16 1987

LAB NO. 7-09-30-756

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample W-6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tina Hitchcock
ANALYST

LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 13, 1987

OCT 16 1987

LAB NO. 7-09-30-753

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample N-W-2 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Ina Hitchcock
ANALYST

SW

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 13, 1987

OCT. 16 1987

LAB NO. 7-09-30-752

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample H-W- 6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions.

Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Hitchcock
SW ANALYST

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

APPENDIX D

TANK INTEGRITY TEST RESULTS

TOXGUARD SYSTEMS, INC.

795 SOUTH LUGO AVENUE, SAN BERNARDINO, CA 92408 714/884-9002 1-800-345-1585

DENNIS BOB

July 10, 1987

Riverside Community Hospital
4445 Magnolia Ave
Riverside California

Dear Sir:

Enclosed please find copies of our worksheets for testing of your underground storage tanks.

Test Date: 7/01/87
Tester: Pat Harris 414812631
John Johnson 414812632

#1 West, 1,000 gallon #2 diesel tank meets the NFPA criteria of plus or minus .050 gph. Tank shows a loss of .018 gph. Tank system tests tight.

#2 South, 6,000 gallon #2 diesel tank meets the NFPA criteria of plus or minus .050 gph. Tank shows a loss of .0476 gph. Tank system tests tight.

If you should have any questions, please feel free to call.

Toxguard Systems, Inc.

Riverside County
Local Oversight Program
Electronic Case File

Site Name: Riverside Community Hospital

Site Number: 871557

Electronic File #: 3

File organized chronologically starting with #1

RETEST No X Yes__

Data Chart for Tank System Tightness Test

petro Tite
TANK TESTER

DATE: 7/1/87

1. OWNER Property [X] Tank(s) [X]

Name: Riverside Community Hosp. Address: 4445 Magnolia Ave Riverside CA Representative: Dave Adams Telephone: 788-3143

Name: Address: Representative: Telephone:

2. OPERATOR

Name: SAME Address: Telephone:

3. REASON FOR TEST (Explain Fully)

To Determine Tightness of: Underground Isolated Tanks THRU Underground Tank/system

4. WHO REQUESTED TEST AND WHEN

Name: Dave Adams & Earl Huckins. Title: Asst Dir. Plant Ops. Company or Affiliation: Date:

Address: Telephone:

5. WHO IS PAYING FOR THIS TEST?

Company, Agency or Individual: Riverside Community Hosp. Person Authorizing: Title: Telephone:

Billing Address: City: State: Zip:

Attention of: Order No.: Other Instructions:

6. TANK(S) INVOLVED

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx Age	Steel/Fiberglass
#1 west	1,000.	unk	#2 Diesel	25 yrs	STL
#2 South	6,000	unk	#2 Diesel	25 yrs	STL
#3 EAST	3,000	unk	#2 Diesel	25 yrs	STL

7. INSTALLATION DATA

Location (North inside driveway, Rear of station, etc.)	Cover (Concrete, Black Top, Earth, etc.)	Fills (Size, Titefill make, Drop tubes, Remote Fills)	Vents (Size, Manifolded)	Siphones (Which tanks?)	Pumps (Suction, Remote, Make it known)
3 sides of physical plant	Asph	2" & 4"	2"	—	Suct

8. UNDERGROUND WATER

Depth to the Water table > 20' per client.

Is the water over the tank? [ ] Yes [X] No

9. FILL-UP ARRANGEMENTS

Tanks to be filled 1000 hr. 6/30 Date Arranged by Dave Adams Name Telephone

Extra product to "top off" and run TSTT. How and who to provide? Consider NO Lead.

Terminal or other contact for notice or inquiry: Company Name Telephone

10. CONTRACTOR, MECHANICS, any other contractor involved

11. OTHER INFORMATION OR REMARKS

Test Results: Advised Dave Adams

Visitors: —

Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test etc.

12. TEST RESULTS

Tests were made on the above tank systems in accordance with test procedures prescribed for petro Tite as detailed on attached test charts with results as follows:

Tank Identification	Tight	Leakage Indicated	Date Tested
#1 west	YES	-.018 GAL/HOUR	7/1/87
#2 South	YES.	-.0476 GAL/HOUR	7/1/87 (HORNE)
NOTE: #3 EAST	NOT TESTED - FUEL LINES IN REPAIR OR REPLACED		

13. CERTIFICATION

This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

7/1/87 Date

1485 Serial No. of Therma Sensor

Patrick Harris
John Johnson
Technicians

Toxguard Systems
Testing Contractor or Company By Signature

795 S. Lugo Ave. San Berd.
Address

92408 (714) 884-9002

14. [illegible] 4445 [illegible] Ga 7/1/[illegible]

Name of Supplier, Owner or Dealer | Address -No. and Street(s) | City | State | Date of Test

15. TANK TO TEST

[illegible] #1

Identity by position

[illegible]

Brand and Grade

16. CAPACITY

Nominal Capacity [illegible] Gallons

By most accurate capacity chart available [illegible] Gallons

Is there doubt as to True Capacity? ☐

See Section "DETERMINING TANK CAPACITY"

From

- | | Station Chart
- | | Tank Manufacturer's Chart
- | | Company Engineering Data
- | | Charts supplied with petro Tite
- |X| Other [illegible]

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up [illegible] " to ⅛ in. [illegible] Gallons

Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

	Stick Readings to ⅛ in.	Gallons	Total Gallons ea. Reading
Inventory			[illegible]
H_2O			[illegible]
Top-Off			[illegible]
Product in full tank (up to fill pipe)			[illegible]

Tank Diameter [illegible]

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (26).

☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM

☒ Stage I

☐ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to Grade* ..... [illegible] "

Add 30" for 4" L ..... "

Add 24" for 3" L or air seal ..... "

Total tubing to assemble Approximate ..... "

20. EXTENSION HOSE SETTING

Tank top to grade* ..... [illegible] "

Extend hose on suction tube 6" or more below tank top ..... "

*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK

Is Today Warmer? ( ) Colder? ( ) ___ °F Product in Tank ___ °F Fill-up Product on Truck ___ °F Expected Change (+ or −)

22. Thermal-Sensor reading after circulation [illegible] digits [illegible] Nearest °F

23. Digits per °F in range of expected change [illegible] digits

24. [illegible] (total quantity in full tank (16 or 17)) × [illegible] (coefficient of expansion for involved product) = [illegible] (volume change in this tank per °F) gallons

25. [illegible] (volume change per °F (24)) ÷ [illegible] (Digits per °F in test Range (23)) = [illegible] (Volume change per digit. Compute to 4 decimal places.) This is test factor (a) .0014

Observed Gravity: 34.1

Observed Temperature: 77.6

Corr. API Gravity: [illegible]

Coef. of Expansion: [illegible]

FOR EZ CHECK WORK SHEET

Customer: RIVERSIDE COMMUNITY HOSPITAL 4445 MAGNOLIA AVE. RIVERSIDE, CA. 7-1-87
Contact: DAVE ADAMS Phone: 788-3700/3140

Tank: _____ JULY 1, 1987
Location/ capacity/product Test Date

Time	Reading #	Chart Divisions Start	Chart Divisions End	Variance Gain Loss	Comput. Var x(a)	Temperature start	Temperature end	VARIANCE	Var x(b)	Net Chng.
1000	1	51	52	+1	+.0016	71.374	71.373	-.001	-.0027	+.0043
1015	2	52	52	±0	±.0000	[illegible]	.372	-.001	[illegible]	+.0027
1030	3	52	37	-15	-.0240	.372	.372	±.000	±.0000	[illegible]
1045	4	37	15	-22	-.0352	.372	.372	±.000	±.0000	-.0352
1100	5	RESET HERE 99	74	-15	-.0240	.372	.372	+.001	+.0027	[illegible]
1115	6	74	62	-12	-.0192	.373	.373	±.0000	±.0000	-.0192
1130	7	62	52	-10	-.0160	.373	.372	-.001	-.0027	-.0133
1145	8	52	46	-6	-.0096	.372	.372	±.000	±.0000	-.0096
1200	9	46	38	-8	-.0130	.372	.371	-.001	-.0027	-.0103
1215	10	38	29	-9	-.0144	.372	.372	±.000	±.0000	-.0144

-.0461

REMARKS:

14
16
15.5
45.5
3145.5

☐ .050
Chart Cal. ☒ .025 ÷ 15.2 = .0016447
chart units (a)

Temp Cal. 3,000 X .0004447 = 2.7264
Tank Cap. Coef. Exp (b)

Obs. Gravity: 35.6

Obs. Temp: 80°F

Corr. API Gravity: 33.5+

Coeff. of Expansion: .0004445

27. DATE / TIME (24 hr.)	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	Standpipe Level in Inches: Beginning of Reading	Standpipe Level in Inches: Level to which Restored	32. Product in Graduate: Before Reading	32. Product in Graduate: After Reading	Product Replaced (−) / Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower − (c)	37. Computation (c) × (a) = Expansion + Contraction −	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (−) #33(V) − #37(1)	At High Level record Total Leak Deflection / At Low Level compute Change per Hour (MPH criteria)
	1000 DIESEL WEST #1									.0014		
0700	Arrived at sight; Took tank burial measurments; checked for water; took inventory of product. Prepared the area for testing.											
0710	Top off product provided by customer: Approx. 55 Gallons											
0750	Set up test equipment and started circulation pump. Bled air at circ. pump, all system hoses and fittings, and											
55	Set up Thermal sensor. Replaced and load tested battery. Self test: 1653 (15) Serial # 1485											
	1 KHF Filter											
1000	First Sensor Reading	1	---	42	---	.715	---	16845	---	---	---	
15	Started High Level Test	2	41.4	42	.715	.710	−.005	890	+45	+.063	−.062	
30	" " " Cont'd	3	42.5	42	.710	.725	+.015	929	+39	+.055	[illegible]	
45	" " " "	4	[illegible]	42	.725	.745	+.020	965	+36	+.050	−.030	
1100	↓ ↓	5	42.5	42	.745	[illegible]	[illegible]	16944	+34	+.048	[illegible]	
01	DROP TO LOW LEVEL	6	—	42/12	—	.635	—	[illegible]	—	—	—	
15	LOW LEVEL TEST	7	14.2	12	.635	.735	+.100	17033	+34	+.048	+.054	
30	↓ ↓	8	13.2	12	.735	.790	+.055	070	+37	+.052	+.003	
45	↓ ↓	9	13.0	12	.790	.835	+.045	103	+33	+.046	−.001	+.002
1200	↓ ↓	10	13.0	12	.835	.880	+.045	137	+34	+.048	−.003	−.001
15	↓ ↓	11	13.0	12	.880	.925	+.045	174	+37	+.052	−.007	−.008
30	↓ ↓	12	13.0	12	.925	.960	+.045	211	+37	+.052	−.007	
				SYSTEM "TIGHT" — LOSS RATE INDICATOR (−.018 GPH)								

A Geological Systems Evaluation Company

UNDERGROUND STORAGE TANK TEST CERTIFICATION

Tank Owner: Riverside Community Hospital

Contact Person: Dave Adams

Address: 4445 Magnolia

City, State: Riverside, CA 92501

Telephone: 714-788-3143

Tank Address: Same

City, State: Same

Test Method: Horner Ezy Chek

Test Date: 2-22-88

Tank	Capacity	Product	High Test	Low Test
#4	1000 gal	Water/2"Fuel	-.037236 gal/hr	
#5	550 gal	Reg Gas	-.016154 gal/hr	

Remarks: Tanks are within guidelines of: California Administration Code Title 23 Waters Subchapter 16 Underground Tank Regulations Section 2643; paragraphs a through d

Approval: Jim Tharp Signature: Jim Tharp

237 South Waterman Avenue • San Bernardino California 92408 • Telephone 714 • 885 • 7072

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

September 21, 1989

Mr. Ed Sheridan
Engineering Department
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, California 92501

SUBJECT: Transmittal of Report Signature Page

Dear Mr. Sheridan;

Enclosed is the signature page for our report dated August, 1989 as requested by Ms. Wendi Sheridan of Riverside County Department of Health Services. When we talked by phone today, I mentioned I would send two other signature pages for two previous reports. Upon further examination, I find that we have already provided signatures for the other two reports.

Please call if we can be of any further service.

Sincerely,

MITTELHAUSER CORPORATION

Daniel E. Collins

Daniel E. Collins, R.G.
Geotechnical Services Manager

DEC/mas
Enclosure
P1174CN

MITTELHAUSER corporation

UNDERGROUND FUEL TANK CLOSURE

RIVERSIDE COMMUNITY HOSPITAL

SUPPLEMENTAL REPORT

Prepared for:

RIVERSIDE COUNTY DEPARTMENT OF HEALTH
RIVERSIDE, CALIFORNIA

Prepared by:

MITTELHAUSER CORPORATION

Timothy A. Lester
Project Geologist

Daniel E. Collins
Geotechnical Services Manager
R.G. #3751

MITTELHAUSER CORPORATION
23272 MILL CREEK DRIVE, SUITE 300
LAGUNA HILLS, CALIFORNIA
714-472-2444

AUGUST 1989

3,000-GALLON DIESEL UST TANK CLOSURE REPORT

RIVERSIDE COMMUNITY HOSPITAL

RIVERSIDE, CALIFORNIA

Prepared for:

RIVERSIDE COUNTY DEPARTMENT OF HEALTH
RIVERSIDE, CALIFORNIA

Prepared by:

MITTELHAUSER CORPORATION
LAGUNA HILLS, CALIFORNIA

JULY 1989

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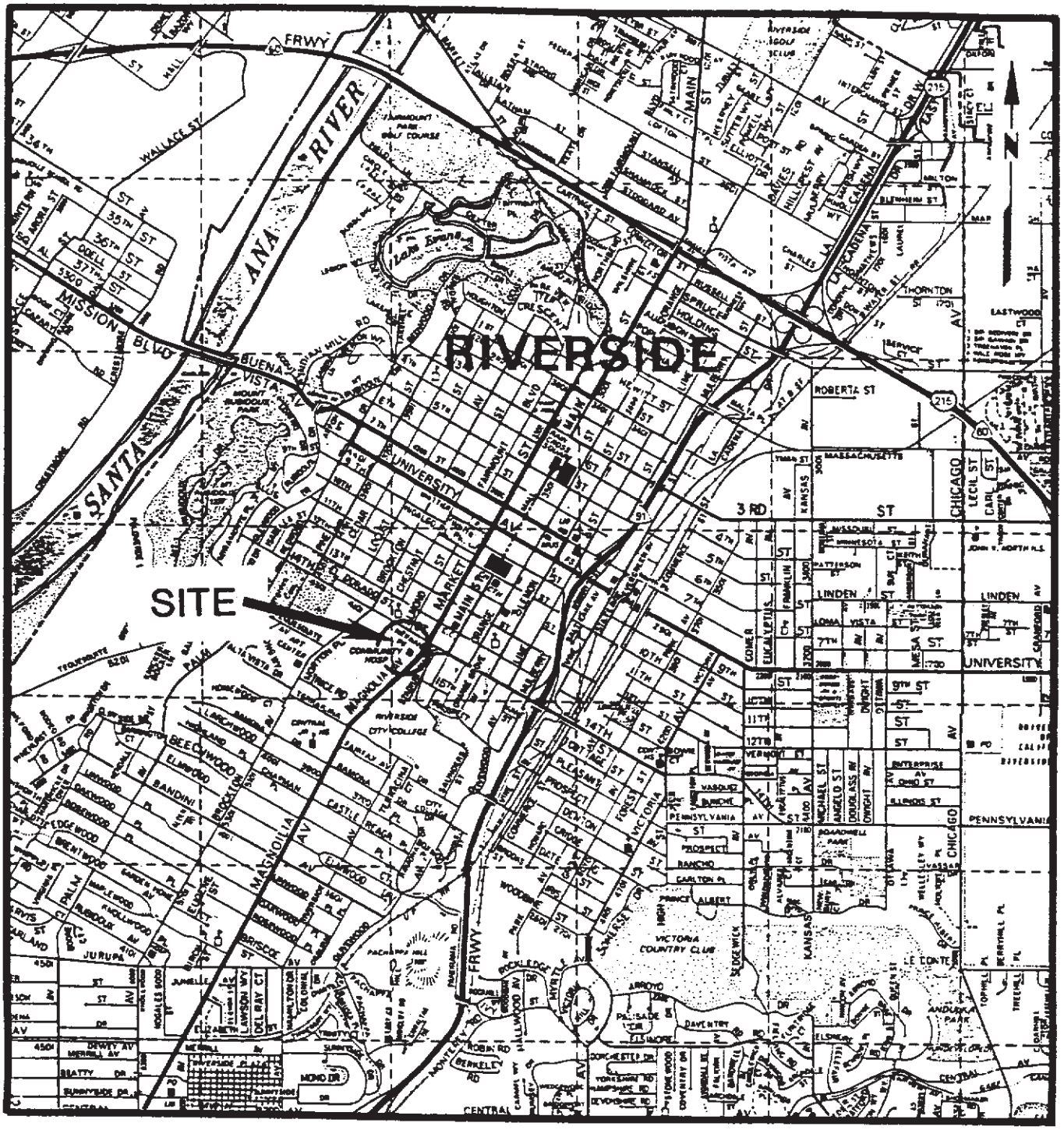
1.0 INTRODUCTION

This addendum report deals specifically with the closure of a 3,000-gallon diesel fuel tank as identified in Riverside County's closure permit #88-330. The report documents investigation and mitigation efforts undertaken with regards to diesel-impacted soils at the site, and presents additional analytical data collected during site work. A follow-up addendum will be provided for a separate underground tank to be abandoned in place.

Mittelhauser Corporation was retained by Riverside Community Hospital in September of 1988, to remove five underground fuel tanks located at their property at 4445 Magnolia Avenue in Riverside, California. The location of the hospital site is shown on Figure 1. Preliminary site assessment work conducted in conjunction with tank removals indicated that a 3,000-gallon underground diesel fuel tank had experienced an unauthorized release at some period. Soil borings were advanced in the vicinity of the tank, and the depth and amount of impacted soils were assessed. These details were reported in Mittelhauser's October 1988, UGST Leak Investigation Report.



0.5 0 0.5

SCALE IN MILES

SOURCE: MODIFIED FROM PAGES 7 AND 13 OF THE RIVERSIDE COUNTY THOMAS GUIDE.

DRN	RJS
CHK BY	
APP BY	
DRAWN	KYM
DATE	10/88
SCALE	AS SHOWN
DWG NO	10740002
PRJ NO	P1074-02

MITTELHAUSER corporation

SITE LOCATION MAP

RIVERSIDE COMMUNITY HOSPITAL

DWG NO. FIGURE 1

REV

2.0 SCOPE OF WORK

Services provided by Mittelhauser Corporation during this phase of work included the following:

- Excavation and removal of one Underground Steel Fuel Tank by Elmer Wood Construction,
- Over-excavation and removal of approximately 300 cubic yards of diesel impacted soils,
- Collection of lateral and vertical confirmation samples from excavation soils,
- Air monitoring with an Organic Vapor Analyzer (OVA) for health and safety compliance, and regulatory (AQMD) compliance, and
- Laboratory chemical analysis of selected soil samples for Total Petroleum Hydrocarbons by EPA Method 418.1.

Several technical problems were present which added to the difficulty of removing the underground diesel tank near the hospital loading dock. Previous site work indicated the presence of underground utilities in the immediate vicinity of the diesel tank. More importantly, the tank was placed such that its southern end was below the corner of a portion of the hospital structure. A section of the loading dock area was removed to provide access to the southern end of the tank. Additionally, an access vault, tied into the building foundation, was located at the southern end of the tank.

Mittelhauser proposed a workplan in our October 1988 report entitled Underground Storage Tank (UGST) Leak Investigation that was designed to remove the tank and as much diesel impacted soil as was feasible. Physical obstacles and safety considerations unique to the job required that equipment used would not A) jeopardize the building foundation; and/or B) disrupt electrical or water utility lines.

3.0 SOIL EXCAVATION

The amount of soil originally estimated for excavation at this site was based on a clean-up action level calculated to be 1000 ppm TPH. Mittelhauser made this initial determination based on the recommendations of the LUFT manual worksheet, a guideline accepted by many regulatory agencies in the state.

Riverside County Health Services personnel later indicated that they required a clean-up action level of 300 ppm Total Petroleum Hydrocarbons. This more conservative clean-up action level resulted in the excavation and disposal of a larger volume of impacted soil than had been anticipated -- specifically those soils with TPH values between 300 and 1,000 ppm.

Breakout and removal of the diesel tank was accomplished June 21 and 22, 1989. A Case 780 backhoe, capable of excavating

to a depth of 18 feet (vertical), was utilized to remove tank overburden. A Ford backhoe equipped with a 12-inch trench bucket was utilized to free the tank sides prior to breakout. On June 21, asphalt and concrete were broken out and the tank overburden removed. Underground utilities were exposed and an attempt was made to break the northern wall of the vault free of the tank. Initial tank removal operations indicated that removal of the tank could not be accomplished without the use of specialized equipment.

On June 22, a Case 580 backhoe equipped with a hydraulic ram was utilized to break the vault away from the tank. The southern wall of the excavation was widened to provide clearance for tank removal, and the entire excavation was deepened to approximately 10 feet. Riverside County Department of Health Services staff witnessed tank removal at approximately 2:00 pm (manifest # 88451774). Manifest and permit information is included in Appendix A.

Information provided by soil borings documented the presence of diesel-impacted soils to a depth of 16.5 feet in the area proposed for excavation. Visual evidence, as well as Organic Vapor Analyzer (OVA) readings, confirmed these findings. Impacted soils were excavated for the remainder of the work day.

On June 23 the excavation was further deepened to approximately 16 feet, the operating depth of the backhoe, and widened to the east and west. Excavation continued until visual evidence and OVA readings indicated that the lateral limits of impacted soils had been encountered. Samples were retrieved from the sidewalls and floor of the tank pit. Elevated OVA readings obtained from the floor of the tank pit indicated the presence of additional impacted soils.

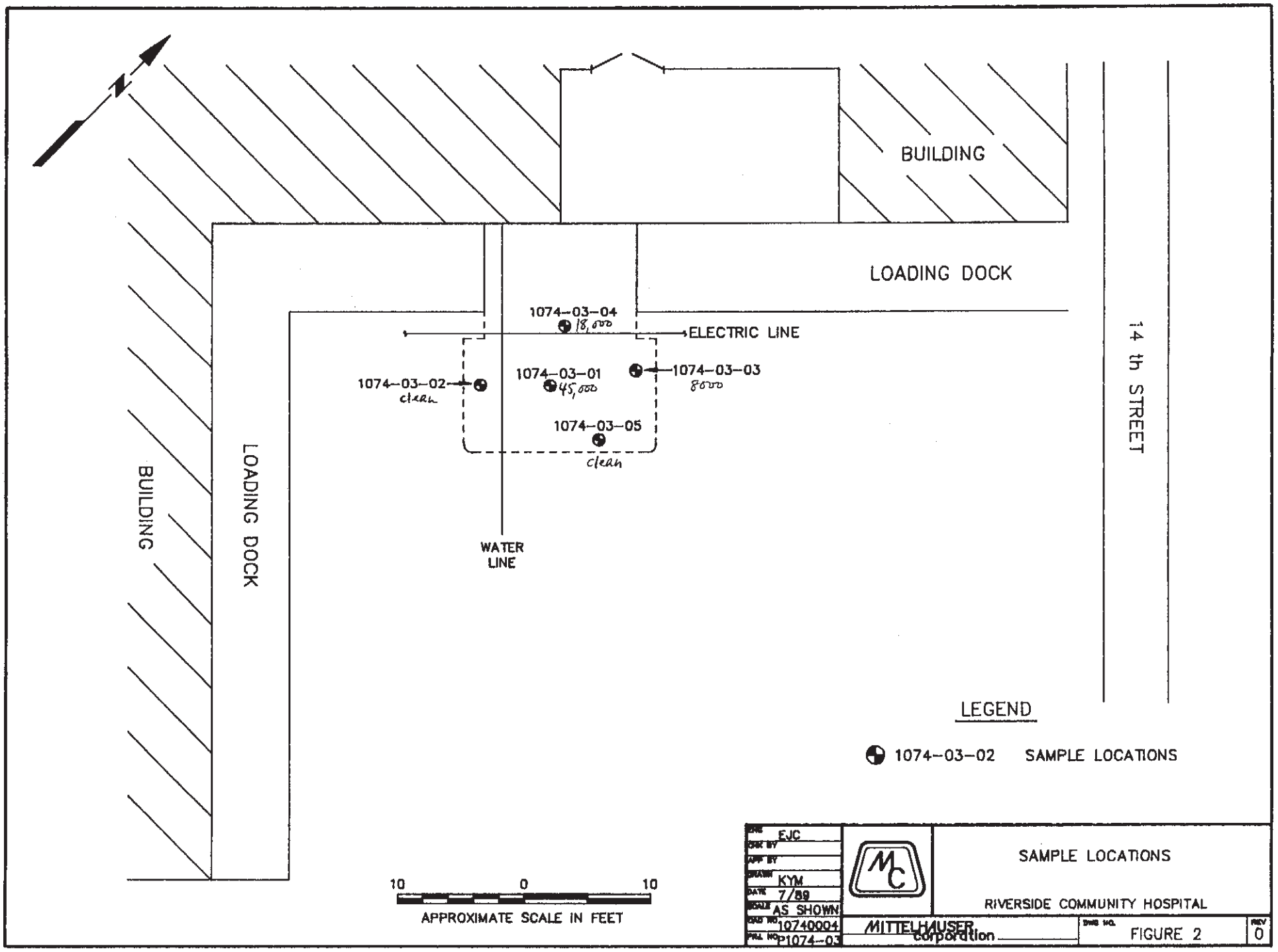
A "Gradall" capable of excavating to a vertical depth of 37 feet, was brought to the job site on June 29. The excavation was widened by approximately four feet and deepened to approximately 17 feet utilizing a 2-cubic yard bucket. At this depth a 36-inch bucket and 17-foot "superboom" were installed on the Gradall and the excavation was deepened to approximately 22 feet. Confirmation samples were obtained in the floor and sidewalls of the excavation. OVA readings and visual observation indicated that the limits of soils impacted above site action levels had been reached. The practical working depth of the Gradall was limited to approximately 22 feet at the site due to the location of utilities and equipment geometry.

4.0 SOIL SAMPLING

As excavation proceeded, sampling was performed to confirm OVA and visual evidence. Samples were obtained June 22 and 23 (sample numbers 1074-03-1 through 1074-03-05) after over-excavation progressed to a depth of approximately 16 feet (the working depth limit of the backhoe). Sample locations for this period are shown on Figure 2.

Several samples (1074-03-02, 1074-03-03, 1074-03-05) were collected to determine the lateral extent of diesel impacted soils. Sample 1074-03-01 was retrieved from the floor of the excavation to determine the hydrocarbon content of impacted soil remaining in the excavation. Sample 1074-03-04 was collected from the area adjacent to the structure to better quantify the impacted soil intended to remain in soils near or under the foundation.

Additional samples were collected on June 29 after excavation work was completed with the Gradall. Samples 1074-03-6, 1074-03-8, and 1074-03-09 were collected from the sidewalls; again to confirm lateral impacted soil boundaries. Sample 1074-03-10 was collected to help characterize soils remaining in the area adjacent and below the foundation. Sample 1074-03-07 was collected to confirm the vertical boundary of impacted soils.

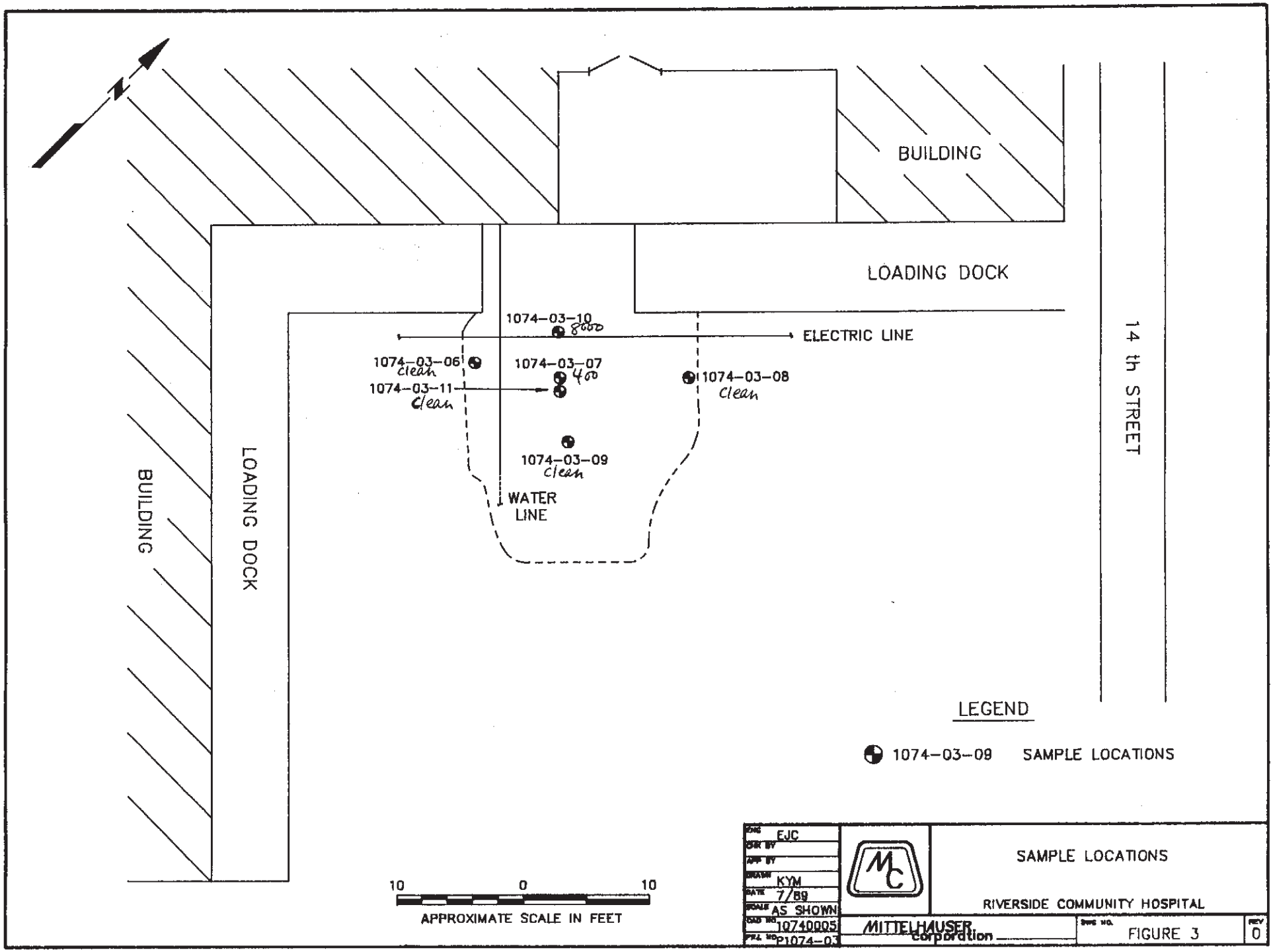

BUILDING
LOADING DOCK
14 th STREET
1074-03-04
18,000
ELECTRIC LINE
1074-03-02
clean
1074-03-01
45,000
1074-03-03
8000
1074-03-05
clean
WATER LINE
BUILDING
LOADING DOCK
LEGEND
1074-03-02 SAMPLE LOCATIONS
10 0 10
APPROXIMATE SCALE IN FEET
DWN EJC
CHK BY
APP BY
DRAWN KYM
DATE 7/89
SCALE AS SHOWN
DWG NO 10740004
FILE NO P1074-03
SAMPLE LOCATIONS
RIVERSIDE COMMUNITY HOSPITAL
MITTELHAUSER corporation
DWG NO. FIGURE 2
REV 0

An additional sample, 1074-03-11, was obtained July 3 by hand auger from the floor of the excavation to better characterize the vertical limit of impacted soils. Figure 3 details these sample locations.

5.0 SAMPLE RESULTS

Initial samples collected June 21 and 22 indicated that the lateral extent of diesel impacted soils to a depth of 16 feet had not been delineated. Samples 1074-03-02 and 1074-03-05, from the west and south sidewalls, returned values lower than the clean-up action level. Sample 1074-03-03, collected from the east sidewall, contained 8,000 ppm Total Petroleum Hydrocarbons (TPH-by EPA Method 418.1). Sample 1074-03-01, collected from the floor of the excavation, contained 45,000 ppm TPH. Sample 1074-03-04 was retrieved in the northern sidewall at the lateral limit of excavation; soil south of this point was left intact due to structural considerations previously outlined. Sample 1074-03-04 indicated that 18,000 ppm TPH remained in the sidewall at this depth.

Sampling was conducted after over-excavation work concluded on June 29, 1989. Lateral sidewall samples collected from the west, south, and east sidewalls (1074-03-06, 1074-03-09, 1074-03-08 respectively), returned values below the clean-up


BUILDING
LOADING DOCK
14 th STREET
ELECTRIC LINE
1074-03-10
8000
1074-03-06
clean
1074-03-07
400
1074-03-11
clean
1074-03-08
clean
1074-03-09
clean
WATER LINE
BUILDING
LOADING DOCK
LEGEND
1074-03-09 SAMPLE LOCATIONS
10 0 10
APPROXIMATE SCALE IN FEET
EJC
KYM
7/89
AS SHOWN
10740005
P1074-03
SAMPLE LOCATIONS
RIVERSIDE COMMUNITY HOSPITAL
MITTELHAUSER Corporation
FIGURE 3
0

action level. Sample 1074-03-07, collected from the floor of the excavation, returned a marginal value of 400 ppm TPH.

Soil sample 1074-03-10, recovered from the northern sidewall for characterization purposes, was analyzed as containing 8000 ppm TPH. An additional sample obtained from the floor of the excavation on July 3, 1989, returned a non-detectable TPH value. A summary of all sample analysis results and sample depths are included in Table 1. Appendix B contains copies of chains-of-custody and laboratory reports.

6.0 QUALITY CONTROL

Soil samples 1074-03-01 through 1074-03-10 were collected from the backhoe bucket. The equipment operator excavated a bucket of soil from the sampling area of interest and brought it to the top of the excavation. Individual samples were obtained by removing material from intact strata with a trowel or sampling spoon. Soil was immediately packed into a sample jar, sealed, and placed into an ice chest refrigerated with blue ice. Latex gloves were utilized to prevent cross contamination, and the sampling device was cleaned with a TSP or Alconox wash followed by a tap water rinse.

TABLE 1

SOIL SAMPLE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH (FT)	SAMPLE LOCATION*	418.1 ANALYSIS RESULT (PPM)
1074-03-01	16.0	FLOOR	45,000
1074-03-02	15.0	WEST SIDEWALL	130
1074-03-03	15.5	EAST SIDEWALL	8,000
1074-03-04	12.0	NORTH SIDEWALL	18,000
1074-03-05	16.0	SOUTH SIDEWALL	50
1074-03-06	15.0	WEST SIDEWALL	ND
1074-03-07	20.0	FLOOR	400
1074-03-08	20.0	EAST SIDEWALL	20
1074-03-09	22.0	SOUTH SIDEWALL	20
1074-03-10	22.5	NORTH SIDEWALL	8,000
1074-03-11	23.0	FLOOR	ND

ND = non-detectable
* Directions reported on chain of custody are reversed

A duplicate sample was retrieved for headspace analysis by placing approximately 6 ounces of soil into a one quart zip lock bag. These bag samples were then analyzed with an Organic Vapor Analyzer (OVA) instrument to aid in quantifying soil hydrocarbon contents.

The OVA (a Foxboro 128GC) is a flame ionization device which utilizes a hydrogen flame to burn hydrocarbons. The volatized hydrocarbons yield quantitative amounts of energy which are measured by the device, relative to a gas standard. Mittelhauser uses a 250 ppm hexane standard for calibration, as this standard gives readings that approximate those of common fuel hydrocarbons.

A hand auger was used to obtain one of the samples analyzed in this investigation (1074-03-11). The auger was cleaned with Alconox and triple rinsed prior to sampling. The auger was advanced by hand to the desired depth, and the sample removed by gloved hand and stored as previously described.

Selected soil samples were submitted to Babcock Laboratories in Riverside, California (an independent California-certified laboratory), or analysis following proper chain of custody procedures. A copy of the completed chains-of-custody are included in Appendix A.

7.0 IMPACTED SOIL DISPOSITION

Soils initially removed at this site were stockpiled adjacent to the excavation area and enclosed with Visqueen plastic sheeting. Continuing over-excavation work and an associated increase in soil volume made this stockpile site impractical.

Soils were transported to the parking area at the southwest corner of the property and enclosed with Visqueen. Alternative treatment methods were presented to Riverside Community Hospital, and a decision was made to haul soils to a Class I landfill. This option is now being initiated.

8.0 DISCUSSION

The workplan recommended in Mittelhauser's October 1988, UGST Leak Investigation has been completed at this site. A larger quantity of soil was removed (approximately 250 cubic yards) than was originally estimated due to a lower than anticipated clean-up action level for hydrocarbons in soils imposed by Riverside County (personal communication Wendy Sheridan).

no, we told you what it was

Data previously collected from soil borings indicate that soils are impacted to a depth of approximately 23 feet beneath the hospital structure. Excavation and sampling detailed

in this report support that information. Soils impacted above clean-up action level have been removed to a depth greater than 22 feet, and confirmation samples have been obtained from the floor and sidewalls of the excavation.

More complete characterization of impacted soils remaining adjacent to the building foundation has also been conducted. Analysis of samples retrieved from the southern sidewall of the excavation indicate that TPH levels are consistent with those noted in previous soil borings.

9.0 CONCLUSIONS

Mitigation actions taken at this site have removed 300 cubic yards of impacted soils from areas accessible to equipment. It is Mittelhauser's conclusion that further excavation is not feasible due to the threat of structural damage to the hospital. All reasonable efforts have been pursued to remove impacted soils at this site.

Mittelhauser believes that the threat to the environment posed by the impacted soil left in place is minor. The clayey nature of the impacted soils, distance to groundwater, and type of fuel (specifically, the absence of significant aromatics or halocarbons in diesel fuel) are factors which support this contention.

? interesting word

The leak source at this site has been removed, a large quantity of impacted soils have been removed and disposed of, and no further product will be introduced to the subsurface. Additionally, the impacted soils left in place will not be subject to percolation effects, as the surface will be sealed by asphalt and concrete. These factors will serve to isolate the impacted soils from the environment and the hydrologic cycle.

10.0 RECOMMENDATIONS

Mittelhauser recommends that no further action be taken at this site. DHS approval of site closure or inactive status is requested. The latter determination would effectively close this case until the hospital is sold or the structure is demolished. The disposition of impacted soils remaining at the site ~~c~~should be addressed at that time.

APPENDIX A

MANIFEST AND PERMIT INFORMATION

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *(Form designed for use on elite (12-pitch typewriter).*

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CA0000187953 Manifest Document No. 000000

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
RIVERSIDE COMMUNITY HOSPITAL
Riverside, CA

4. Generator's Phone (714) 985-4200

A. State Manifest Document Number 88451774

B. State Generator's ID

5. Transporter 1 Company Name: Containerized Chemical Disposal

6. US EPA ID Number: CAT000611483

C. State Transporter's ID

D. Transporter's Phone (714)625-6645

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
GIBSON REFINING
3121 Standard Street
Bakersfield, CA

10. US EPA ID Number: CAD980863177

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Waste Combustible liquid nos, Combustible liquid NA1993	001	TT	400	G	State 223 / EPA/Other CA only
b.					State / EPA/Other
c. JUN 20 1989					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Water 90%
Gasoline 10%

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
Gloves and goggles

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Louis E Lopez | Signature | Month Day Year: 10 2 1989

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month Day Year

GENERATOR

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

COUNTY OF RIVERSIDE, DEPARTMENT OF HEALTH

UNDERGROUND STORAGE TANK CLOSURE/ABANDONMENT APPLICATION

plication for closure or abandonment of Underground Storage Tanks. Applicant is to submit ur (4) copies of the plans. All fees are NON REFUNDABLE and payable when the plans are bmitted with this application.

PLAN CHECK NUMBER

IE OF FACILITY	ADDRESS OF FACILITY	PHONE NUMBER
IVERSIDE COMMUNITY HOSPITAL	4445 MAGNOLIA AVE. RIVERSIDE 92501	(714) 788-3143
AME OF OWNER	ADDRESS OF OWNER	PHONE NUMBER
SAME AS ABOVE		
AME OF OPERATOR	ADDRESS OF OPERATOR	PHONE NUMBER
DAVID ADAMS		(714) 788-3143
IE OF CONTRACTOR/CONTACT PERSON	ADDRESS OF CONTRACTOR	PHONE NUMBER
MITTELHAUSER CORP. / BOB STECHMANN	23272 MILL CREEK DR. STE 300 LAGUNA HILLS, 92653	(714) 472-2444
NTRACTORS LICENSE TYPE & NUMBER		
SUBCONTRACTOR: PRECISION ENGINEERING LIC. A-527271		

ANSWER THE FOLLOWING QUESTIONS DESCRIBING THE TANKS TO BE CLOSED OR ABANDONED. IF YOU HAVE MORE THAN FOUR (4) TANKS, PROVIDE INFORMATION ON ADDITIONAL APPLICATION FORM.

	TANK 1 *	TANK 2	TANK 3	TANK 4
INGLE/DOUBLE WALL TANK	SINGLE			
NK IN USE (YES/NO)	NO		* PERMIT ORIGINALLY PULLED FOR	
TANK SUSPECTED OF EAKING (YES/NO)	NO		THIS TANK ON 12/6/88 APPLICATION NO. 88-330.	
E OF TANK (YEARS)	~30 YRS			
ONSTRUCTION MATERIAL TANK(S)	STEEL			
ZARDOUS SUBSTANCE TORAGE HISTORY	DIESEL #2			

scribe method of tank closure by removal, abandonment or temporary closure. Provide estination and final disposition of tank.

5,000-GALLON TANK IN VAULT WILL BE ABANDONED IN PLACE.

ATTACHED IS COPY OF WORK PLAN AND ANALYTICAL RESULTS

SENT TO WENDY SHERIDAN

ates for which the tanks are to be temporarily closed (if applicable).

ame of person to Contact in an Emergency	(714) 24 Hour Emergency Phone Number
AVID ADAMS / BOB STECHMAN	788-3143 / 472-2444

PLICANT NAME	APPLICANT SIGNATURE	DATE OF APPLICATION
BOB STECHMANN	Bob Stechman	6/7/89

PLEASE MAKE YOUR CHECK PAYABLE TO THE COUNTY OF RIVERSIDE

LOSURE/ABANDONMENT FEE

rst Tank ~~$130.00~~ $200

ach Additional ank ~~$ 40.00~~ $60

AMOUNT ATTACHED $ 60.00

TRANSACTION NO.

APPENDIX B

CHAINS-OF-CUSTODY RECORDS

MITTELHAUSER corporation

23272 MILL CREEK ROAD, SUITE 300
LAGUNA HILLS, CALIFORNIA 92653
(714) 472-2444

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 1073

PROJECT NAME: Riverside Hospital

SAMPLED BY: (PRINTED AND SIGNATURE) Timothy A Lister

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): 418.1						PRESERVATIVE	REMARKS
1074-05-001	6/22/91	315	Soil	center @ 16'	1	X						Ø	

RELINQUISHED BY: (SIGNATURE)	DATE 6/24/91	TIME 1127	RECEIVED BY: (SIGNATURE) 930	TOTAL NO. OF SAMPLES (THIS SHIPMENT) / TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	LABORATORY: BARCOCK
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT:	LABORATORY PHONE NUMBER: ( )
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES ( )NO	

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
CANARY, LABORATORY
PINK, CLIENT
GOLD, PROJECT FILE

REMARKS:

— 24 hr —

MITTELHAUSER corporation

23272 MILL CREEK ROAD, SUITE 300
LAGUNA HILLS, CALIFORNIA 92653
(714) 472-2444

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER: 1074-03

PROJECT NAME: Riverside Hospital

SAMPLED BY: (PRINTED AND SIGNATURE) Timothy A Lester

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): 418.1						PRESERVATIVE	REMARKS
1074-03-02	6/25/97	915	Soil	E @ 16'	1	X							Soil
1074-03-03	"	1055		W @ 16'	1	X							
1074-03-04	"	1015		S @ 14.5	1	X							
1074-03-05	"	1135		N @ 15.5	1	X							
					4								

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT) 4	LABORATORY:
	6/25/97	1212	C. Vignis	TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 4	BABCOCK
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT:	LABORATORY PHONE NUMBER: ( )
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES ( )NO	

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
CANARY, LABORATORY
PINK, CLIENT
GOLD, PROJECT FILE

REMARKS:

MITTELHAUSER corporation

23272 MILL CREEK ROAD, SUITE 300
LAGUNA HILLS, CALIFORNIA 92653
(714) 472-2444

24 hr

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER: 1074-03

PROJECT NAME: Riverside Hospital

SAMPLED BY: (PRINTED AND SIGNATURE) Timothy A. Lester

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): 418.1						PRESERVATIVE	REMARKS
1074-03-06	6-29-89	235	Soil	EAST SW	1	X							Soil
1074-03-07		245		Center floor	1	X							
1074-03-08		320		WEST SW	1	X							
1074-03-09		325		~~SOU~~ NORTH SW	1	X							
1074-03-10		330		SOUTH SW	1	X							
					5								

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT)	5	LABORATORY:
T A Lester	6/29/89	440	[illegible]	TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	5	BABCOCK
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT:		LABORATORY PHONE NUMBER: ( )
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES ( )NO		

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
CANARY, LABORATORY
PINK, CLIENT
GOLD, PROJECT FILE

REMARKS:

Edward S. Babcock & Sons, Inc
3215 Chicago Avenue
Riverside, CA 92507

(714) 684-1881

Mittelhauser Corp.

CHAIN OF CUSTODY RECORD

Lab #s: _____ Invoice No. _____

Project No.	Project Name / Location
1074-03	Riverside Hospital

Samplers: (signature)

Description	Sampled Date	Sampled Time	Determination Requested: 1,2,4	Number of Containers	Condition of Sample: Sealed	Condition of Sample: Chilled	Condition of Sample: Preserved	Remarks
Soil @ 23' Center Pit	7/3/89	1202	X	1	ø	✓	ø	24hr

RUSH

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
	7/3/89 1225				

Relinquished By:	Date/Time	Received By:	Received For Lab By:	Date / Time
				7/3/89 1225

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

06/28/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890622-330
Invoice No.	51381

Sample Marked:
Riverside Hospital
Pj#1073 1074-03-01
Center 16 ft. soil

Submitted	Sampled
Tim	Tim Lester
06/22/89	06/22/89
16:27	15:15

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	45000 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/23/89

Notes:

cc:

Edward S. Babcock & Sons, Inc.

Allison Mackey

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

06/28/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890623-368
Invoice No.	51391

Sample Marked:
Riverside Hospital
Pj#1074-03-02 E @ 16 ft.
soil

Submitted	Sampled
TAL	TAL
06/23/89	06/23/89
12:12	09:15

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	130 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/26/89

Notes:

cc:

Edward S. Babcock & Sons, Inc.

Allison Machy

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS, INC.

P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

06/28/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890623-369
Invoice No.	51391

Sample Marked:
Riverside Hospital
Pj#1074-03-03 W @ 16 ft.
soil

Submitted	Sampled
TAL	TAL
06/23/89	06/23/89
12:12	10:55

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	8000 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/26/89

Notes:

cc:

Edward S. Babcock & Sons, Inc.

Allison Machuy

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS, INC.

P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

06/28/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890623-370
Invoice No.	51391

Sample Marked:
Riverside Hospital
Pj=1074-05-04 S @ 14.5 ft
soil

Submitted	Sampled
TAL 06/23/89 12:12	TAL 06/23/89 10:45

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	18000 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/26/89

Notes:

cc:

Edward S. Babcock & Sons, Inc.

Allison Machuy

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS, INC.

P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

06/28/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890623-371
Invoice No.	51391

Sample Marked:
Riverside Hospital
Pj#1074-03-05 N @ 15.5 ft
soil

Submitted	Sampled
TAL	TAL
06/23/89	06/23/89
12:12	11:35

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	50 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/26/89

Notes:

cc:

Edward S. Babcock & Sons, Inc.

Allison Mackey

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

07/03/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890629-954
Invoice No.	51570

Sample Marked:
Pj#1074-03-06 Riverside
Hospital East SW soil
depth = 22.0'

Submitted	Sampled
Tim 06/29/89 16:45	Tim 06/29/89 14:35

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	ND mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/30/89

Notes: ND = None Detected

cc:

Edward S. Babcock & Sons, Inc.

Allison Machy

Riverside County
Local Oversight Program
Electronic Case File

Site Name: Riverside Community Hospital

Site Number: 871557

Electronic File #: 4

File organized chronologically starting with #1

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1908

EDWARD S. BABCOCK & SONS, INC.

P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

07/03/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890629-955
Invoice No.	51570

Sample Marked:
Pj#1074-03-07 Riverside
Hospital soil Center
Floor depth = 22.5'

Submitted	Sampled
Tim 06/29/89 16:45	Tim 06/29/89 14:45

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	400 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/30/89

Notes: ND = None Detected

cc:

Edward S. Babcock & Sons, Inc.

Allison Mackey

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

07/03/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890629-956
Invoice No.	51570

Sample Marked:
Pj#1074-03-08 Riverside
Hospital soil West SW
depth = 22'

Submitted	Sampled
Tim 06/29/89 16:45	Tim 06/29/89 15:20

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	20 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/30/89

Notes: ND = None Detected

cc:

Edward S. Babcock & Sons, Inc.

Allison Machuy

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

07/03/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890629-957
Invoice No.	51570

Sample Marked:
Pj#1074-03-09 Riverside
Hospital soil North SW

Submitted	Sampled
Tim 06/29/89 16:45	Tim 06/29/89 15:25

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	20 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/30/89

Notes: ND = None Detected

cc:

Edward S. Babcock & Sons, Inc.

Allison Machuy

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

07/03/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890629-958
Invoice No.	51570

Sample Marked:
Pj#1074-03-10 Riverside
Hospital soil South SW

Submitted	Sampled
Tim 06/29/89 16:45	Tim 06/29/89 15:30

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	8000 mg/kg		
Practical Quantitation Limit	10 mg/kg		

Date analysis completed: 06/30/89

Notes: ND = None Detected

cc:

Edward S. Babcock & Sons, Inc.

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CALIF. DHS CERTIFIED
PHONE (714) 684-1881
LABORATORIES
3215 CHICAGO AVE.

ESTABLISHED 1906
EDWARD S. BABCOCK & SONS, INC.
P.O. BOX 432
RIVERSIDE, CALIFORNIA 92502

07/06/89

To: Mittelhauser Corp.
23272 Mill Creek Road,Ste.300
Laguna Hills, CA 92653
Attn:

Lab No.	890703-27
Invoice No.	51629

Sample Marked:
Project #1074-03-11?
Riverside Hospital
Soil @ 23' Center Pit

Submitted	Sampled
Tim L. 07/03/89 12:25	T.L. 07/03/89 12:02

Chain of Custody on file: Y

Parameter Name	Results	Parameter Name	Results
EPA 418.1 - soil extension			
Total Petroleum Hydrocarbons	ND mg/kg		
Practical Quantitation Limit	10 mg/kg		

ND = None Detected at PQL.

Date analysis completed: 07/05/89

Notes:

cc:

Edward S. Babcock & Sons, Inc.

Allison Machy

REPORT OF
UNDERGROUND STORAGE TANK (UGST) REMOVALS
AT THE
RIVERSIDE COMMUNITY HOSPITAL
RIVERSIDE, CALIFORNIA

Prepared for:

RIVERSIDE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
RIVERSIDE, CALIFORNIA

Prepared by:

MITTELHAUSER CORPORATION
LAGUNA HILLS, CALIFORNIA

JANUARY 1989

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2.0 TANK REMOVAL..... 1

3.0 SOIL SAMPLING..... 4

APPENDIX A Permits, Manifests, and Receipts

APPENDIX B Chain of Custody and Laboratory Report

1.0 INTRODUCTION

Mittelhauser Corporation was contracted by Riverside Community Hospital to remove five (5) underground fuel storage tanks (UGSTs) at the facility. The volumes and type of fuel stored in each tank are listed below:

VOLUME (in gallons)	TYPE OF FUEL
120	Leaded gasoline
280	Leaded gasoline
1,000	Diesel #2
3,000	Diesel #2
6,000	Diesel #2

Originally the two gasoline tanks were thought to be 500-gallon tanks. Mittelhauser subcontracted Precision Engineering (Contractors License No. A-527271), of Fontana California, to provide the manpower and equipment necessary to excavate, triple rinse, removal, transport, and dispose of the UGSTs.

2.0 TANK REMOVAL

The tank removal of three tanks was originally scheduled for 6 December 1988. Construction delays from the new hospital wing caused the removals to be postponed.

The 120-gallon, 280-gallon, and 1,000-gallon tanks were removed from the site on 21 December 1988. Appropriate permits were filed with the Riverside County Environmental Health

Department and the City of Riverside Fire Department. The South Coast Air Quality Management District (SCAQMD) was notified per Rule 1166 (Reference No. 88355-12). Copies of the permits are present in Appendix A. Two representatives from the County Health Department witnessed the removals.

Nieto & Sons Trucking, of Anaheim California, provided the equipment to pressure rinse the UGSTs. Approximately 350 gallons of rinse water was pumped from the three tanks into a vacuum truck and transported by Nieto & Sons (State Transporters ID No. 908417) to DeMenno/Kerdoon (EPA ID No. CAT080013357), in Compton California, for treatment eventual disposal. A copy of the completed manifest is included in Appendix A.

Approximately ten pounds of dry ice was added to each tank after the triple rinsing. A copy of the purchase receipt for the ice is attached in Appendix A.

Mittelhauser Corporation provided the LEL instrument (a Gastech Tri-meter Model GX-82) to monitor any explosive conditions present in the tank. Each tank was measured three times: prior to triple rinsing, after the triple rinsing, and after the addition of dry ice. The LEL readings from each tank are summarized below:

	120-Gallon	280-Gallon	1,000-Gallon
Prior to rinsing	10%	20%	5%
After rinsing	5%	5%	1%
After dry ice	3%	3%	1%

Soil from each excavation was monitored with an OVA (Foxboro Century Model 128) to determine if the SCAQMD limits of 50 ppm were exceeded. No emissions at or over this limit were recorded.

The UGSTs were all removed on 21 December 1988 and immediately loaded onto a truck and transported to American Metal Recycling, Inc., in Ontario California, for disposal. A receipt for delivery of the tanks is contained in Appendix A.

The UL and manufacturer identification tags were removed from each tank and given to Mr. Joe Asbury of the Riverside County Health Department. The following information was retrieved from the tank tags:

120-Gallon Tank: manufactured by National Tank and Manufacturing Company, Inc., Los Angeles, California on October 8, 1964. 12-guage steel, Print No. 35770. LAFC Approved 37-60-2. UL No. 5822905.

280-Gallon Tank: manufactured by National Tank and Manufacturing Company, Inc., Los Angeles, California on June 6, 1962. 12-guage steel, Print No. 23022. LAFC Approved 39-60.

1,000-Gallon Tank: manufactured by Keesee Tank & Pump Company, Anaheim, California in October 1969. Tank dimensions 46" x 144". 10-guage steel, Tank No. 63-60-3.

After removal, each tank was visually inspected for any signs of leakage or damage. No holes, dents, cracks, or leaks were identified on any of the tanks.

3.0 SOIL SAMPLING

A total of six soil samples were collected, two beneath each tank. The County Health Department representatives witnessed the sample collection and installed sample seals on each container. Samples were collected from depths of two feet and six feet below the tank invert beneath the fill pipe of each tank. Due to restrictions at the 120-gallon tank location, a sample was collected at 3.5 feet instead of 6 feet.

The samples were collected from the backhoe bucket by a Mittelhauser geologist using a hand trowel. Samples from beneath the diesel tank were analyzed for Total Petroleum Hydrocarbons (EPA Method 418.1). Samples from the gasoline tanks were analyzed for Total Petroleum Hydrocarbons (EPA Method 8015-modified), Benzene, Toluene, Xylenes, and Ethybenzene (BTXE) (EPA Method 8020), and total lead (EPA Method 7421).

The collected samples were stored on ice and delivered to a State-certified lab, Truesdail Laboratories, in Tustin California, following proper chain of custody procedures. A copy of the completed chain of custody is included in Appendix B.

The results of the laboratory analyses (in mg/kg or ppm) are summarized below. The lab report is contained in Appendix B.

PARAMETER	120-Gal Tank @ 2'	120-Gal Tank @ 3.5'	280-Gal Tank @ 2'	280-Gal Tank @ 6'	1,000-Gal Tank @ 2'	1,000-Gal Tank @ 6'
TPH (418.1)	-	-	-	-	<1.0	<1.0
TPH (8015)	421	925	<10	<10	-	-
Benzene	<0.005	<0.005	<0.005	<0.005	-	-
Toluene	2.8	3.6	0.0252	0.0548	-	-
Ethylbenzene	1.8	1.3	0.0205	0.0101	-	-
Xylenes	145.1	278.5	4.1	3.1	-	-
Total Lead	11.50	11.64	6.30	7.32	-	-

The California Department of Health Services Leaking Underground Fuel Tank (LUFT) Manual was used as a guideline to establish permissible levels of hydrocarbon constituents at the site. The calculated maximum allowable levels are presented in Table 1. As shown on this table, cleanup values of 100 ppm TPH, 0.3 ppm benzene and toluene, and 1 ppm xylenes and ethylbenzene are suggested for the site. It must be noted that the site was one point below qualifying for the highest levels permitted.

Comparing the laboratory results to the allowed levels shows that the soil beneath the 120-gallon tank is required to be removed and treated or properly disposed of. Xylene concentrations of 4.1 and 3.1 ppm beneath the 280-gallon tank are slightly above the 1.0 ppm limit. However, given the fact that the remaining BTXE and TPH parameters were within allowable levels and the site narrowly missed allowable levels 50 times greater, the soil beneath the 280-gallon tank was not believed to present a significant health risk and was left in place.

TABLE 1

LUFT MANUAL MAXIMUM ALLOWABLE LEVEL WORKSHEET

Leaching Potential Analysis for Gasoline
Using Total Petroleum Hydrocarbons(TPH)
and Benzene, Toluene, Xylene and Ethylbenzene (BTX&E)

The following table was designed to permit estimating the concentrations of TPH and BTX&E that can be left in place without threatening ground water. Three levels of TPH and BTX&E concentrations were derived (from modeling) for sites which fall into catagories of low, medium or high leaching potential. To use the table, find the appropriate description for each of the features. Score each feature using the weighting system shown at the top of each column. Sum the points for each column and total them. Match the total points to the allowable BTX&E and TPH levels.

SITE FEATURE	SCORE	SCORE 10 PTS IF CONDITION IS MET	SCORE	SCORE 9 PTS IF CONDITION IS MET	SCORE	SCORE 5 PTS IF CONDITION IS MET
Minimum Depth to Ground Water from the Soil Sample (feet)		>100	9	51-100		25-50\1
Fractures in subsurface (applies to foothills or mountain areas)	10	None		Unknown		Present
Average Annual Precipitation (inches)		<10	9	10-25		26-40\2
Man-made conduits which increase vertical migration of leachate	10	None		Unknown		Present
Unique site features: recharge area, coarse soil, nearby wells, etc	10	None		At least one		More than one
COLUMN TOTALS-TOTAL PTS	30	+	18	+	0	= 48
RANGE OF TOTAL POINTS	49pts or more		41 - 48 pts		40pts or less	
MAXIMUM ALLOWABLE B/T/X/E LEVELS (PPM)	1/50/50/50		.3/.3/1/1		NA\3	
MAXIMUM ALLOWABLE TPH LEVELS (PPM)	1000		100		10	

\1 If depth is greater than 5 ft. and less than 25 ft., score 0 points.
If depth is 5 ft. or less, this table should not be used.
\2 If precipitation is over 40 inches, score 0 points.
\3 Levels for BTX&E are not applicable at a TPH concentration of 10ppm

SOURCE: Table 2-1, page 27 of the Leaking Underground Fuel Tank (LUFT) Manual California Department of Health Services, May 1988.

On 5 January 1989, the contaminated soil beneath the 120-gallon tank was excavated and placed in a 20-cubic yard roll-off box. Approximately 15 cubic yards of impacted soil were removed. The tank passed an integrity test in 1985 and has not been used since that date. Visual inspection of the tank at the time of removal did not identify any holes or leaks. During the initial Mittelhauser site walk, one of the fill pipes on this tank was found uncovered. It is believed that the minor contamination found is the result of rain and runoff water overflowing the tank through the open fill pipe displacing gasoline into the subsurface.

All of the identified contaminanted soil was removed surrounding the tank pit. One additional soil sample was collected from the bottom of the excavation at a depth of eight feet below grade. This sample was delivered to Truesdail Laboratories the same day to be analyzed for the same parameters as the earlier samples. Less than 10 ppm total petroleum hydrocarbons and no BTXE parameters were found in the sample taken at eight feet. A copy of the chain of custody record and lab report for this sample are attached in Appendix B. The contaminated soil was transported to PWI in Bakersfield, California for disposal on 23 January 1989.

APPENDIX A

PERMITS, MANIFESTS, AND RECEIPTS

UNDERGROUND STORAGE TANK
PERMIT FOR CLOSURE
COUNTY OF RIVERSIDE DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SERVICES DIVISION
HAZARDOUS MATERIALS BRANCH

Type of Permit

Removal [X]

Abandonment in Place [ ]

Temporary Closure [ ]

This permit shall not be construed to allow for violation of any law, nor does it prevent further corrections of errors found on the application, plans, and at the site. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this permit, all applicable permits required by the local fire department, building department, and the air quality management district must be obtained and be available for review at the closure site.

All tank closures must, at a minimum, comply with the California Underground Storage Tank Regulations and the appropriate section of the California Health & Safety Codes.

Geo-Sec has applied for and is granted
Owner/Contractor/Applicant

a permit to Remove, 4 underground
Remove/Abandon/Temp. Close No.

storage tank(s) at Riverside Community Hospital located at
Facility

4445 Magnolia Avenue in Riverside, California.
Street Address City/Town

Underground tank closure inspections must be schedule five (5) business days in advance. Telephone (714) 369-1141.

Steven Dettton	12-06-88	88-330
Permit Approved By	Date	Application #

~~Fire — Moudry 8-12-88 1:00 PM~~

* This Permit for Closure is VALID FOR 90 DAYS from the date of approval. If no reasonable action is taken within that period, the applicant may be required to reapply for a closure permit with all pertinent fees associated.

DOH-HEH-003 (New 3/87)

CITY OF Riverside FIRE DEPARTMENT • 3900 Main Street • Riverside, California 92522 • 714/787-7321

782-5321

PERMIT
TO INSTALL, ALTER OR REMOVE TANKS, PIPING, AND APPURTENANCES FOR THE STORAGE OF FLAMMABLE LIQUIDS, FLAMMABLE GASES, AND LIQUIFIED PETROLEUM GASES

Location 4445 Magnolia Riverside

Name Riverside Community Hospital Date 12-6-88

Permission is granted to:

- [ ] Install
- [ ] Alter
- [x] Remove
- [ ] Aboveground
- [x] Underground
- [x] Tank
- [ ] Pump
- [ ] Dispensor
- [x] Piping

CONTRACTOR:

Name Geo-Sec Inc. Phone 714-885-7072

Address 237 So. Waterman Ave. San Bernardino CA 92408

Tank Size (Gals.)/Serial No.	Tank Size (Gals)/Serial No.
1. 550 /	3. 6000 /
2. 1000 /	4. 550 /

For the storage of:

- [ ] Gasoline
- [ ] Oil
- [ ] Waste
- [ ] LPG
- [ ] Thinners
- [ ] Natural Gas
- [x] Other Diesel

To be used in connection with:

- [ ] Service Station
- [ ] Bulk Plant
- [ ] Agriculture
- [ ] Industrial
- [x] Commercial
- [ ] Other ____ :

INSPECTION:
DATE APPROVED:

Tanks	By	
Product Piping	By	
Vent Piping	By	
Fill Pipe	By	
Vapor Recovery	By	
Final Inspection	By	

RIVERSIDE FIRE DEPARTMENT

By: Richard C. Ballinger

213-2-R5

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. *(Form designed for use on elite (12-pitch typewriter).*

Instructions on the Back

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC000036194 Manifest Document No. 19411 A01
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Riverside General Hospital
4445 Magnolia Ave. Riverside, CA. 92501

A. State Manifest Document Number 88019101

B. State Generator's ID

4. Generator's Phone (714 788 3419

5. Transporter 1 Company Name
NIETO & SONS TRUCKING CAT080011611 6

6. US EPA ID Number

C. State Transporter's ID 908417

D. Transporter's Phone 714 990 6655

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Demenno Kardoon
2000 N. Alameda
Compton CA 90222

10. US EPA ID Number CAT080013352

G. State Facility's ID

H. Facility's Phone 213 537 7100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NA 9189 HAZARDOUS WASTE N.O.S. liquid ORM-E	1	TT	350	G	State 241 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: DAVID C. ADAMS — Signature: David C. Adams — Month Day Year: 1 12 21 88

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Joseph A Colon — Signature: Joseph A Colon — Month Day Year: 1 12 21 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Do Not Write Below This Line

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 400, Sacramento, CA 95812-0400

LOWE ICE COMPANY

16688 CERES STREET
P.O. BOX 871
FONTANA, CALIF. 92335
(714) 350-0577

№ 96269

STORE NO.	PHONE	DATE
P.O.2299		12-21-88

CUSTOMER NAME Manzano

ADDRESS DOCK

CASH ☐ CHARGE ☒ EXCHANGE ☐

QUANTITY	DESCRIPTION	EACH	EXTENSION
	3½ LB. CUBE		
	7 LB. CUBE		
	11 LB. CUBE (Charge)		
	20 LB. CUBE		
	40 LB.		
30 lbs	DRY ICE	.50¢	15.00
	DRIVER Frank	TAX	.90
		TOTAL	15.90

ALL GOODS LISTED ABOVE HAVE BEEN INSPECTED AND RECEIVED IN GOOD CONDITION.

I CERTIFY THAT THE FLOOR IN FRONT OF THE ICE MERCHANDIZER WAS DRY AT THE TIME OF TRANSACTION.

CUSTOMER SIGNATURE Scott E K

Thank You

INVOICES DUE AND PAYABLE 30 DAYS FROM DATE OF INVOICE. ANY SUMS NOT PAID WITHIN TERMS OF SALE ARE SUBJECT TO A SERVICE CHARGE OF ONE AND ONE-HALF PERCENT (1½%) PER MONTH (18% PER YEAR). PAY BY INVOICE STATEMENTS SENT FOR RECONCILIATION PURPOSES ONLY.

WHITE - CUSTOMER COPY / YELLOW - OFFICE COPY

AMERICAN FUEL TANK METAL RECYCLING, INC.

2202 South Milliken Avenue
Ontario, CA 91761
(714) 947-2888

No. 29361

TANK DISPOSAL FORM

Date: 12-21 ,19 88
Job #
P. O. #

CONTRACTOR: Precision Engineering, Inc.
ADDRESS: 9991 Citrus Av. Fontana, CA 92335
JOB SITE: Riverside Hospital
ADDRESS: 4445 Magnolia Av. Riverside, CA
DESTINATION: A.M.R. 2202 S. Milliken Ave., Ontario, CA 91761

DATE	TIME	PROJECTED TANKS	ORDERED BY	LIC. NO.

SPECIAL INSTRUCTIONS:

TIME IN:
TIME OUT:

✓	Services Rendered	Cost
___	Disposal Fee	100.00
___	Extensive Loading Time	150.00
___	Disposal Fee with Permit	250.00
___	Fiberglass Tank Disposal Fee Per Tank	400.00
___	Delivered	200.00
___	Bobtail Disposal Fee	250.00
___	Cancellation Fee Delivered	250.00
	TOTAL CHARGES	$ 0

All fees incurred are per load unless specified. Terms are net 30 days from date of invoice. Contractor's signature represents acceptance of terms for payment, and confirms that tank removal complies with State laws.

CONTRACTOR'S SIGNATURE

TANKS RECEIVED

QTY.	GALLONS	TYPE F* S*	NET TONS	TOTAL
1	280 120		.14	.08
	500		.21	.14
	550		.24	
1	1000 - 12 ft.		.44	.44
	1000 - 6 ft.		.61	
	1500		.87	
	2000		.97	
	2500		1.14	
	3000		1.32	
	4000		1.64	
	5000		2.42	
	6000		2.84	
	7500		3.26	
	8000		3.44	
	9000		3.82	
	10000		4.33	
	12000		4.93	

NO. OF TANKS: 3 TOTAL NET TONS: .66

*F — FIBERGLASS *S — STEEL 105

CERTIFICATE OF TANK DISPOSAL / DESTRUCTION

THIS IS TO CERTIFY THE RECEIPT AND ACCEPTANCE OF THE TANK(S) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED HAVE BEEN COMPLETELY DESTROYED FOR SCRAP PURPOSES ONLY.

AUTHORIZED REP. 12-21-88 DATE

CONTRACTOR COPY

RECEIVED JAN 5 1989

APPENDIX B

CHAIN OF CUSTODY AND LABORATORY REPORT

MITTELHAUSER corporation
23272 MILL CREEK ROAD, SUITE 300
LAGUNA HILLS, CALIFORNIA 92653
(714) 472-2444

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 1074-03

PROJECT NAME: RIVERSIDE COMMUNITY HOSPITAL

SAMPLED BY: (PRINTED AND SIGNATURE) BOB STECHMANN / [signature]

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): 8015-M	8020 (BTXE)	TOTAL Pb (7421)	413.1			PRESERVATIVE	REMARKS
1074-03-014	12/21/[illegible]	1230	SOIL	120-GALLON TANK @ 2'	1	X	X	X				ICE	[illegible]
1074-03-015	"	1235	"	" " @ 3.5'	1	X	X	X				"	[illegible]
1074-03-016	"	1250	"	1,000-GALLON @ 2'	1				X			"	[illegible]
1074-03-017	"	1300	"	" " @ 6'	1				X			"	
1074-03-018	"	1335	"	280-GALLON @ 2'	1	X	X	X				"	[illegible]
1074-03-019	"	1340	"	" " @ 6'	1	X	X	X				"	12/22/[illegible]
					6								

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)		
[signature]	12/22/[illegible]	0930		TOTAL NO. OF SAMPLES (THIS SHIPMENT): 6	LABORATORY: TEUSSDAIL
				TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 6	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: JULIA	LABORATORY PHONE NUMBER: (714) 730-6239
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO	

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
CANARY, LABORATORY
PINK, CLIENT
GOLD, PROJECT FILE

REMARKS: CONTACT BOB STECHMANN @ (714) 472-2444 W/ RESULTS ASAP !!!

REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS
RESEARCH — DEVELOPMENT — TESTING

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92680
AREA CODE 714 • 730-6239
AREA CODE 213 • 225-1564
CABLE: TRUELABS

CLIENT **Mittelhauser Corporation**
23272 Mill Creek, Ste. 300
Laguna Hills, CA 92653
Attention: Bob Stechman

DATE December 27, 1988

RECEIVED December 22, 1988

SAMPLE **6 Soils Custody Seals Intact 12/22/88**
Project Name: 1074-03

LABORATORY NO. 31616

INVESTIGATION **Project Name: Riverside Hospital, As Requested**

RESULTS

	Milligrams per Kilogram			
Parameter	**1074-03-014**	**1074-03-015**	**1074-03-18**	**1074-03-19**
Total Petroleum Hydrocarbons (8015 extended) mg/l	421	925	<10	<10
Benzene (8020) mg/l	<0.005	<0.005	<0.005	<0.005
Toluene (8020) mg/l	2.8	3.6	0.0252	0.0548
Ethylbenzene (8020) mg/l	1.8	1.3	0.0205	0.0101
Xylenes (8020) mg/l	145.1	278.5	4.1	3.1
Lead mg/l	11.50	11.64	6.30	7.32

RECEIVED
DEC 29 1988

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these Laboratories.

	Milligrams per Kilogram	
	1074-03-016	1074-03-017
Total Petroleym Hydrocarbons (418.1) mg/kg	<1.0	<1.0

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Gregory W. Everett

Gregory W. Everett
Project Manager

MITTELHAUSER corporation
23272 MILL CREEK ROAD, SUITE 300
LAGUNA HILLS, CALIFORNIA 92653
(714) 472-2444

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 1074-03

PROJECT NAME: RIVERSIDE COMMUNITY HOSPITAL

SAMPLED BY: (PRINTED AND SIGNATURE) BOB STECHMANN / Bob Stechmann

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): 8015-M	8020 (BTXE)	Total Pb (7421)				PRESERVATIVE	REMARKS
1074-03-020	1/5/89	1030	SOIL	120-GAL TANK @ 8'	1	X	X	X				ICE	REQUEST NORMAL TAT

RELINQUISHED BY: (SIGNATURE) Bob Stechmann	DATE 1/5/89	TIME 12:1	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT) 1 / TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 1	LABORATORY: TRUESDAIL
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: GREG	LABORATORY PHONE NUMBER: (714) 730-6239
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO	

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
CANARY, LABORATORY
PINK, CLIENT
GOLD, PROJECT FILE

REMARKS: CONTACT BOB STECHMANN W/ RESULTS ASAP @ (714) 472-2444

UNDERGROUND STORAGE TANK (UGST) LEAK INVESTIGATION

AT THE

RIVERSIDE COMMUNITY HOSPITAL

RIVERSIDE, CALIFORNIA

Prepared for:

RIVERSIDE COUNTY DEPARTMENT OF HEALTH
RIVERSIDE, CALIFORNIA

Prepared by:

MITTELHAUSER CORPORATION
LAGUNA HILLS, CALIFORNIA

OCTOBER 1988

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2.0 SCOPE OF THE INVESTIGATION	3
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APPENDIX B - Boring Logs

APPENDIX C - Analytical Laboratory Results

APPENDIX D - Tank Integrity Test Results

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TECHNICAL CERTIFICATION STATEMENT

This report presents the results of a limited soil investigation around a leaking underground storage tank at the Riverside Community Hospital. Available information regarding previous investigations at the site, regional and local geology, and hydrogeology were used as the basis for preliminary assessments. Additional information obtained from drilling and testing programs was used to characterize site subsurface conditions.

The data, opinions, conclusions, and recommendations presented herein are, to the best of my knowledge, accurate and complete. Future studies may reveal information which could alter the interpretation of site subsurface conditions. This should be brought to my attention should it occur.

_____
Date

_____
Daniel E. Collins
Registered Geologist
State of California
No. 3751

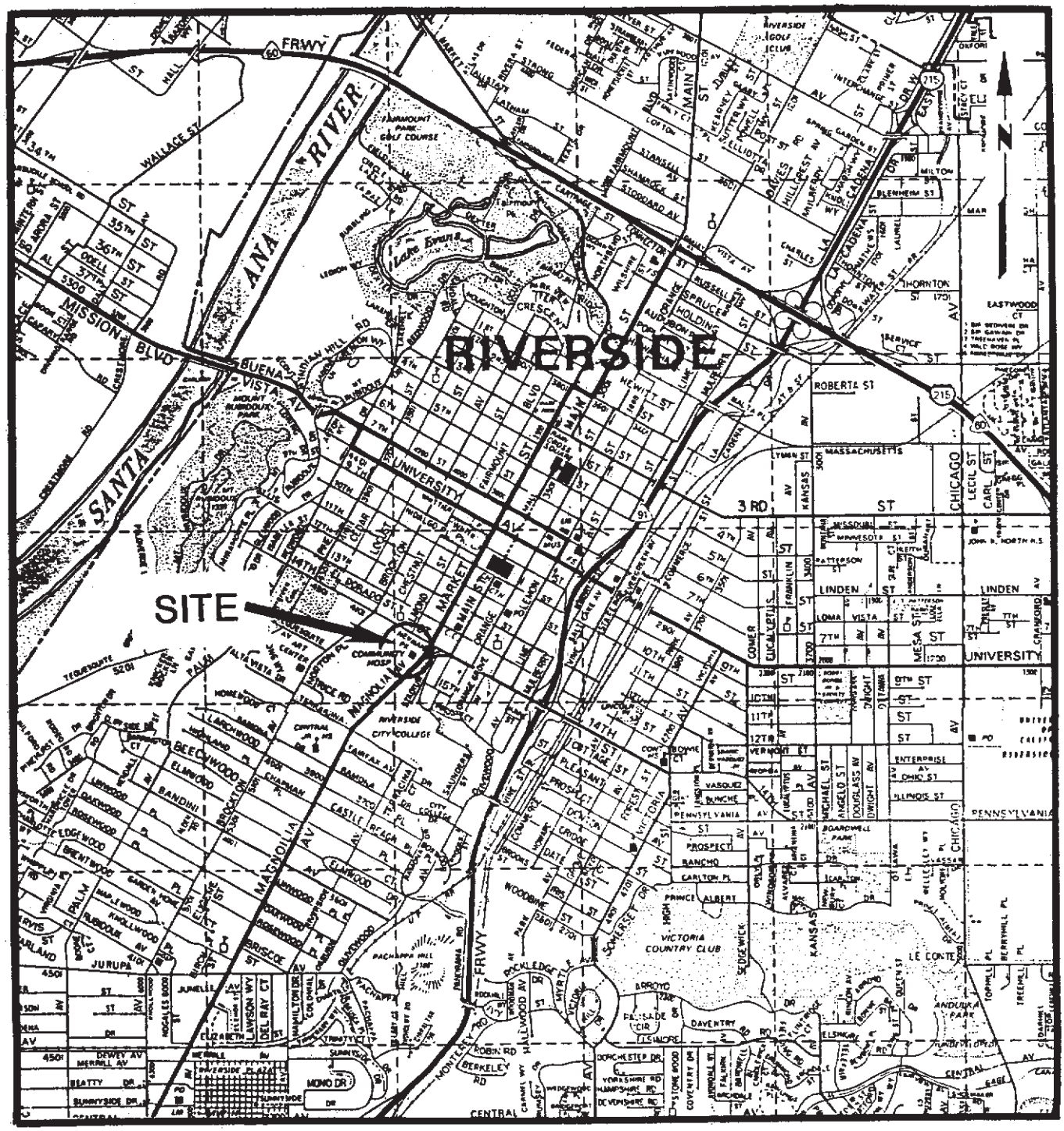
1.0 INTRODUCTION

Mittelhauser Corporation was contracted by Riverside Community Hospital on September 26, 1988 to remove five (5) underground storage tanks (UGSTs) on the property. The hospital is located at 4445 Magnolia Avenue in Riverside, California, as shown on Figure 1. The UGSTs are, or have been, used as fuel storage for emergency generators at the hospital. The capacity and type of fuel stored in each tank is listed below.

CAPACITY (in gallons)	TYPE OF FUEL
550	Leaded gasoline
550	Leaded gasoline
1,000	# 2 diesel
3,000	# 2 diesel
6,000	# 2 diesel

The 6,000-gallon diesel tank is the only tank currently used. After a new 10,000-gallon diesel tank is installed, the existing five tanks are to be removed and disposed of properly. The five tanks were precision tested in 1987, with four of them passing. The tank integrity test results are presented in Appendix D to this report. The 3,000-gallon diesel tank failed the precision test at which time the fuel was removed and the tank triple rinsed.

A subsequent soils investigation performed by Toxguard Systems, Inc. in July 1987, identified that the subsurface soils



SOURCE: MODIFIED FROM PAGES 7 AND 13 OF THE RIVERSIDE COUNTY THOMAS GUIDE.

DWG BY	RJS
CHK BY	
APP BY	
DRAWN	KYM
DATE	10/88
SCALE	AS SHOWN
JOB NO	10740002
FILE NO	P1074-02

SITE LOCATION MAP

RIVERSIDE COMMUNITY HOSPITAL

MITTELHAUSER corporation

DWG NO. FIGURE 1

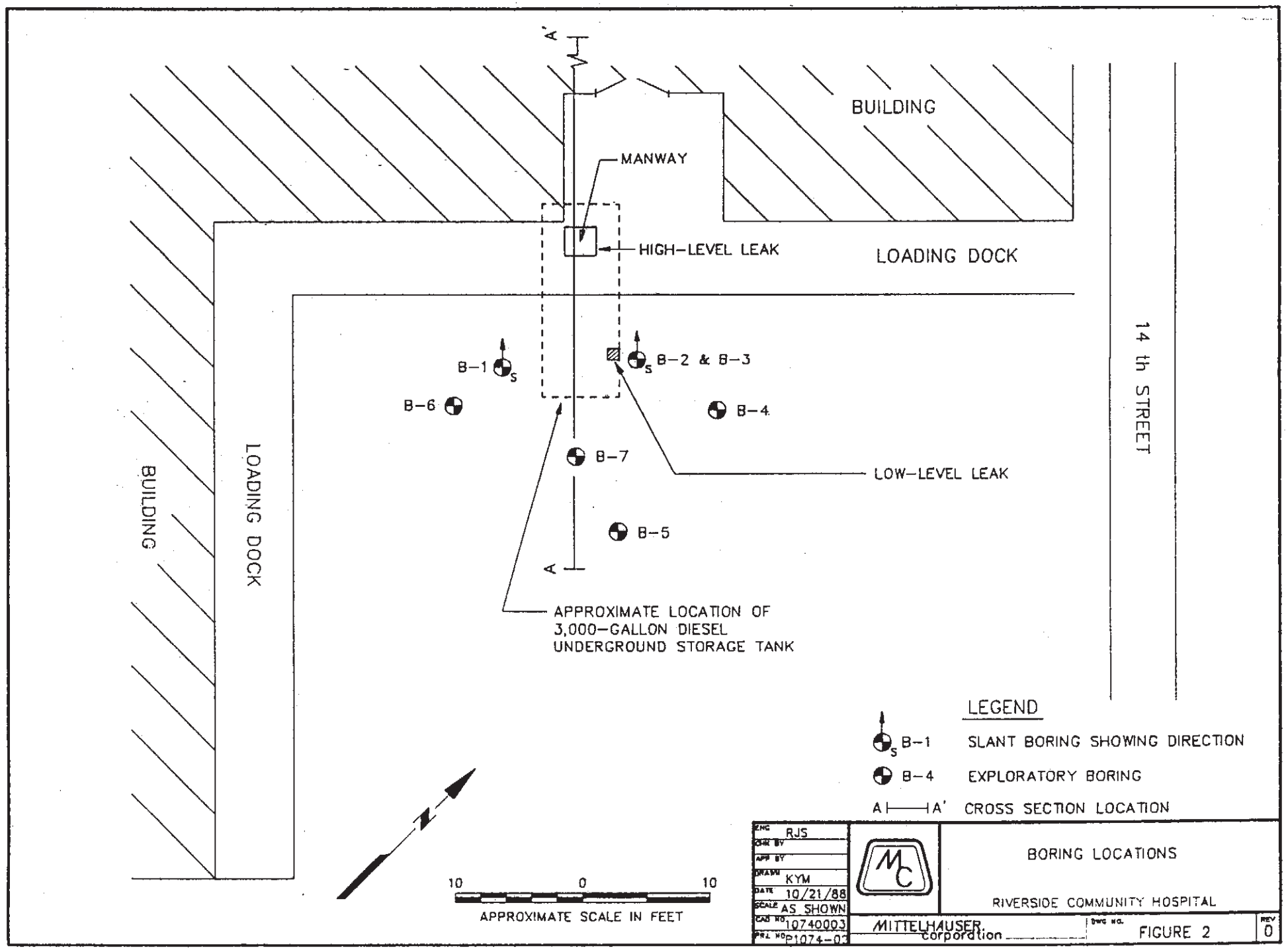
REV

around the tank contained significant levels of diesel contamination. The tank was found to have a high-level leak near the manway. A portion of the tank was exposed in an excavation and a second low-level leak was found on the northwest side of the tank as shown on Figure 2.

Mittelhauser Corporation submitted a proposed Site Assessment Plan to Mr. Joseph Asbury of the Riverside County Health Department on October 12, 1988, to identify the lateral and vertical extent of the diesel contamination associated with the leaky UGST. The Plan was given verbal approval by Mr. Asbury on October 13, 1988. A copy of the Site Assessment Plan is included as Appendix A.

2.0 SCOPE OF THE INVESTIGATION

A limited soil boring program was proposed to characterize the lateral and vertical extent of the soil contamination around the leaking underground storage tank. Mittelhauser Corporation contracted Geosec, of San Bernardino, California, to provide equipment and manpower to complete the soil borings. A truck-mounted Mobile B-53 drill rig using eight-inch OD hollow-stem augers was utilized on October 14, 1988, to complete seven soil borings around the tank. The locations of the borings are shown on Figure 2 and the boring logs are presented in Appendix B.


A'
BUILDING
MANWAY
HIGH-LEVEL LEAK
LOADING DOCK
14 th STREET
B-1
B-2 & B-3
B-6
B-4
B-7
LOW-LEVEL LEAK
B-5
A
BUILDING
LOADING DOCK
APPROXIMATE LOCATION OF
3,000-GALLON DIESEL
UNDERGROUND STORAGE TANK
LEGEND
B-1 SLANT BORING SHOWING DIRECTION
B-4 EXPLORATORY BORING
A A' CROSS SECTION LOCATION
10 0 10
APPROXIMATE SCALE IN FEET
ENG RJS
CHK BY
APP BY
DRAWN KYM
DATE 10/21/88
SCALE AS SHOWN
CAD NO. 10740003
PRJ NO P1074-03
BORING LOCATIONS
RIVERSIDE COMMUNITY HOSPITAL
MITTELHAUSER corporation
DWG NO. FIGURE 2
REV 0

Two of the seven borings, B-1 and B-2, were slant drilled at angles of 33 ° and 27.5 ° from vertical, respectively, to assess the extent of any contamination beneath the loading dock and nearby structure. Boring B-1 was drilled to a vertical depth of 28.1 feet. The bottom of the boring extended 18.3 feet northwest of the surface location shown on Figure 2 (approximately 7 feet beneath the building). Boring B-2 was drilled to 52.3 feet and extended some 16 feet under the building. The depths of the completed borings are shown below:

BORING NUMBER	DRILLED LENGTH (FT)	DEPTH BELOW GROUND SURFACE (FT)
B-1 *	33.5	28.1
B-2 *	59.0	52.3
B-3	61.5	61.5
B-4	26.0	26.0
B-5	26.0	26.0
B-6	21.0	21.0
B-7	21.0	21.0

* Slant borings

In the proposed Site Assessment Plan, groundwater monitoring wells were to be constructed in the completed soil borings. This was based on the understanding that the depth to groundwater beneath the facility was approximately 30 to 40 feet below grade. However, boring B-3 was terminated at the depth of 61.5 feet below grade without encountering groundwater. As a result of the increased depth to groundwater and the fact that no soil contamination was identified below 30 feet, plans to conduct groundwater monitoring at the facility became unwarranted.

Therefore, no groundwater monitoring wells were constructed on-site.

The borings in which soil contamination was identified (B-1, B-2, B-3, and B-7) were each backfilled with a ten-foot plug of Volclay grout placed at the bottom and then filled with "clean" soil cuttings (as determined by OVA readings and odor) which was compacted using the drill rig.

The remaining three borings were backfilled with "clean" soil and compacted using the augers and slide hammer of the drill rig. The augers were spun in reverse allowing the soil to be moved down the borehole. The slide hammer was utilized for compaction purposes. This compaction method usually replaced all of the soil cuttings generated during the drilling of the boring. The surface of the borehole was sealed with asphalt cold patch to the original grade.

Soil samples were obtained utilizing both California-modified and Standard Penetration Test split-spoon samplers with brass liners. Liners were removed from the sampler as soon as possible, the ends covered with aluminum foil and plastic caps, sealed with duct tape, labelled, and placed in a cooler on ice. The soil from a second liner, obtained from the same depth, was placed in glass screw-top jars and allowed to

volatilize. These jars were then analyzed at the termination of each boring with an Organic Vapor Analyzer (OVA) instrument to identify the soil sample which had the highest OVA reading. The OVA (a Foxboro 128GC) was utilized as a screening tool for the determination of which soil samples were submitted for laboratory analysis.

Equipment decontamination procedures were employed to reduce the possibility of cross contamination between borings. The hollow-stem augers used to drill the borings were steam cleaned between each boring. The split-spoon sampler and brass liners were cleaned in an Alconox detergent wash, followed by a rinse with tap water, and lastly by a distilled water rinse prior to each sampling event.

The selected soil samples were submitted to Enseco/CRL Laboratories, in Garden Grove, California (an independent California-certified laboratory) for analysis following proper chain of custody procedures. A copy of the completed chain of custody is included in Appendix C. A discussion of the analytical results is presented in Section 4.0.

3.0 SITE GEOLOGY AND HYDROLOGY

The site is located on a flat, elevated terrace, approximately 825 feet above Mean Sea Level (MSL), cut by the Tequesito Arroyo. The Santa Ana River lies approximately 1.25 miles to the northwest of the hospital. The terrace is composed of unconsolidated alluvial sediments deposited by the Santa Ana River during Quaternary time. A prominent mountain, Mount Rubidoux, rises to 1400 feet above MSL and is located approximately 0.75 miles northwest of the site.

Logs from the seven borings indicate that native soil on the property consist of sandy to clayey silts. The soil is medium brown to reddish brown in color; contains minor amounts of fine-grained sand and fine gravel; is moderately firm, slightly to moderately cohesive; and varies from dry to moist.

The deep borings, B-2 and B-3, encountered a silty sand layer beneath the silty horizon at depths of 42 feet and 45 feet, respectively. The silty sand is reddish to orangish brown, fine- to medium-grained sand with minor fines and fine gravel; is moderately loose, moist; and contains clasts of weathered granite. The lithology of the site is shown on cross section A-A' which is included as Figure 3. The location of the cross section is shown on Figure 2.

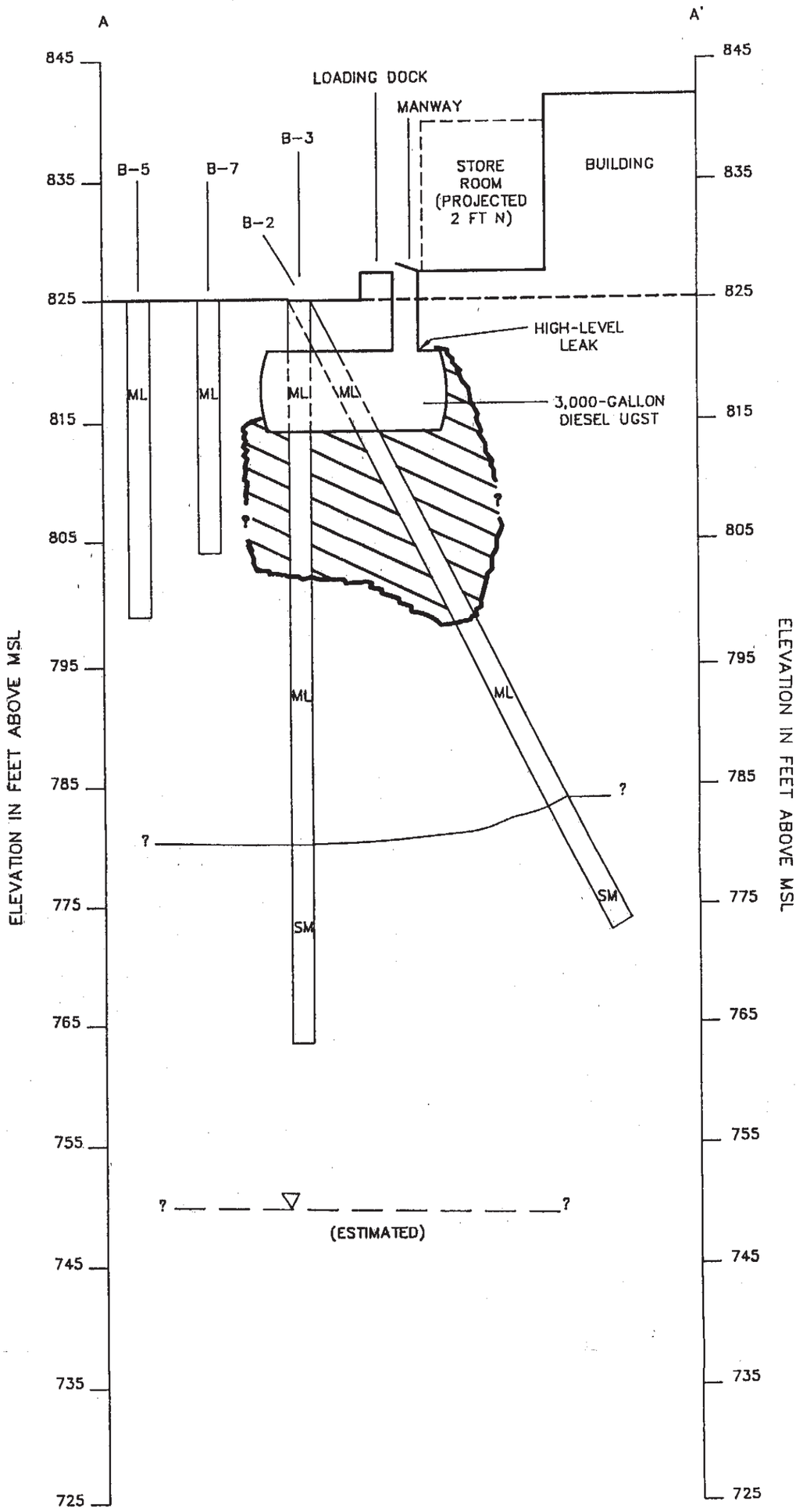
Riverside County
Local Oversight Program
Electronic Case File

Site Name: Riverside Community Hospital

Site Number: 871557

Electronic File #: 5

File organized chronologically starting with #1



EXPLANATION

B-7 EXPLORATORY BORING

ML UNIFIED SOIL CLASSIFICATIONS SYSTEM SYMBOL

GROUNDWATER TABLE (ESTIMATED)

ZONE OF IMPACTED SOILS (ESTIMATED)
(TOTAL PETROLEUM HYDROCARBON LEVELS >1,000 PPM)

NOTE: BORINGS B-2 & B-3 PROJECTED 5 FT SW AND B-5 PROJECTED 3 FT SW INTO SECTION LINE.

SCALE 1"=10'
HORIZONTAL = VERTICAL

DRN RJS	MITTELHAUSER Corporation	CROSS SECTION A – A'	
CHK BY		RIVERSIDE COMMUNITY HOSPITAL	
APP BY			
DRAWN KKM			
DATE 10-24			
SCALE 1"=10'			
CAD NO. 10740801		DWG NO. FIGURE 3	REV 0
PWA NO. 1074-02			

Groundwater was not encountered in any of the borings completed at the site. However, based on a review of the topography of the area and second hand information about the depth to groundwater in the vicinity, the first occurrence of groundwater is estimated to be between 70 and 80 feet below the ground surface.

The direction of regional groundwater flow is most likely to the northwest towards the Santa Ana River. Local flow directions, however, could be quite different and can not accurately be predicted without on-site measurements.

4.0 ANALYTICAL RESULTS

The selected soil samples were submitted to Enseco/CRL laboratory, in Garden Grove, California. The laboratory reports and completed chain of custody record are presented in Appendix C. A total of thirteen soil samples from the seven borings were submitted for analyses of total petroleum hydrocarbons using EPA Method 418.1. Table 1 presents the laboratory results of this investigation as well as those obtained by Toxguard during the previous investigation.

The sample depths for slant borings B-1 and B-2 listed on Table 1 are true vertical depths below ground surface. As shown

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
IN PPM (MG/KG)

Sample Number	Sample Location	Total Petroleum Hydrocarbons (EPA Method 418.1)	Total Petroleum Hydrocarbons (EPA Method 8015)
1074-02-001	B-3, 15-16.5'	20,000	---
1074-02-002	B-3, 25-26.5'	150	---
1074-02-003	B-2, 15.5-16.9'	25,000	---
1074-02-004	B-2, 28.8-30.2'	34	---
1074-02-005	B-2, 33.3-34.6'	8	---
1074-02-006	B-1, 14.7-15.5'	17,000	---
1074-02-007	B-1, 18.9-19.7'	7,500	---
1074-02-008	B-1, 23.1-23.9'	22,000	---
1074-02-009	B-1, 27.3-28.1'	15	---
1074-02-010	B-5, 27.5-29'	8	---
1074-02-011	B-4, 20-21'	10	---
1074-02-012	B-6, 15-16'	ND	---
1074-02-013	B-7, 20-21'	ND	---
* #2	N/A	19,800	---
* #4	N/A	20,500	---
* #6	N/A	15,200	---
* E-2 ft	East wall	---	ND
* E-6 ft	East wall	---	ND
* W-2 ft	West wall	---	ND
* W-6 ft	West wall	---	ND
* N-W-2 ft	Northwest wall	---	ND
* N-W-6 ft	Northwest wall	---	ND

Note: Sample depths of slant borings B-1 and B-2 are corrected for true vertical depth.

--- Analysis not performed

ND - Non detected

N/A - Not Available

* Analyses performed during Toxguard Investigation by AnaCon Labs. No records of exact sample locations or detection limits.

Detection Limits: Enseco/CRL (EPA Method 418.1) Soil= 1.0 mg/kg (ppm)

on this table, soil samples from borings B-1, B-2, and B-3 show elevated concentrations (up to 25,000 ppm) of total petroleum hydrocarbons (TPH) present in the soil. The zone of contamination (TPH concentrations >1,000 ppm) in boring B-1 appears to extend from 13 feet to 26 feet below ground surface. In boring B-2, contaminated soils were encountered from 12 feet to 27 feet in depth. The zone of contamination was found to be from 10 feet to 23 feet in boring B-3. Cross section A-A' (Figure 3) shows the location of the UGST and the estimated impacted soil zone.

The remaining four borings, B-4, B-5, B-6, and B-7, encountered only minor concentrations of TPH (10 ppm). These borings were drilled around the tank (a maximum of 11 feet away) as shown on Figure 2. Given the close proximity of these borings, the contaminated zone appears to be confined to a limited area around the tank.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The Department of Health Service's Leaking Underground Fuel Tank (LUFT) Manual is the regulatory guideline which applies to this site. The LUFT Manual contains a rationale to determine appropriate cleanup levels for soil and groundwater impacted by leaking UGSTs. Various factors, including the depth to groundwater, type of fuel stored in the UGST, annual rainfall, and

geologic and man-made conditions present, are used to calculate these cleanup levels.

Table 2 presents the cleanup level calculation worksheet (from the LUFT Manual) for the site. As shown on the table, a total of 48 points, indicating a cleanup level of 1,000 ppm TPH, is calculated for the site. However, it should be noted that a 10,000 ppm TPH cleanup level is acceptable for sites which total 49 points or more.

As shown on Figures 2 and 3, the UGST is located partially beneath a concrete loading dock and extends approximately two feet under the corner of a Storage Room (constructed after the tank was installed). Laboratory results indicate that there are concentrations of TPH in the soil around the tank, above the calculated cleanup level. Under normal circumstances, the UGST and all contaminated soil with concentrations of TPH above the cleanup value should be excavated and disposed of properly. However, because the UGST and contaminated soil are situated beneath the loading dock and building, excavation and removal becomes a delicate, complicated, if not impossible situation. The excavation and removal of all of the contaminated soil is not economically feasible due to the extensive shoring and excavation techniques which would be required to maintain the integrity of the hospital building.

TABLE 2

LUFT MANUAL CLEANUP LEVEL WORKSHEET

Leaching Potential Analysis for Diesel Using Total Petroleum Hydrocarbons (TPH) and Benzene, Toluene, Xylene and Ethylbenzene (BTX&E)

The following table was designed to permit estimating the concentrations of TPH and BTX&E that can be left in place without threatening ground water. Three levels of TPH and BTX&E concentrations were derived (from modeling) for sites which fall into catagories of low, medium or high leaching potential. To use the table, find the appropriate description for each of the features. Score each feature using the weighting system shown at the top of each column. Sum the points for each column and total them. Match the total points to the allowable BTX&E and TPH levels.

SITE FEATURE	SCORE	SCORE 10 PTS IF CONDITION IS MET	SCORE	SCORE 9 PTS IF CONDITION IS MET	SCORE	SCORE 5 PTS IF CONDITION IS MET
Minimum Depth to Ground Water from the Soil Sample (feet)		>100	9	51-100		25-50\1
Fractures in subsurface (applies to foothills or mountain areas)	10	None		Unknown		Present
Average Annual Precipitation (inches)		<10	9	10-25		26-40\2
Man-made conduits which increase vertical migration of leachate	10	None		Unknown		Present
Unique site features: recharge area, coarse soil, nearby wells, etc	10	None		At least one		More than one
COLUMN TOTALS-TOTAL PTS	30	+	18	+	0	= 48
RANGE OF TOTAL POINTS	49pts or more		41 - 48 pts		40pts or less	
MAXIMUM ALLOWABLE B/T/X/E LEVELS (PPM)	1/50/50/50		.3/.3/1/1		NA\3	
MAXIMUM ALLOWABLE TPH LEVELS (PPM)	10000		1000		100	

\1 If depth is greater than 5 ft. but less than 25 ft., score 0 points. If depth is 5 ft. or less, this table should not be used.
\2 If precipitation is over 40 inches, score 0 points.
\3 Levels for BTX&E are not applicable at a TPH concentration of 100ppm

SOURCE: Table 2-2, page 28 of the Leaking Underground Fuel Tank (LUFT) Manual California Department of Health Services, May 1988

The zone of contaminated soil (TPH concentrations above 1,000 ppm) is estimated to be approximately 20 feet wide by 20 feet long and extending from 6 feet to 25 feet below grade centered around the UGST. This calculates to a volume of 275 cubic yards of contaminated soil, most of which underlies the building and loading dock as shown on Figure 3.

Mittelhauser Corporation recommends that the leaking 3,000-gallon diesel tank be excavated and removed. Contaminated soil with concentrations of TPH greater than 1,000 ppm found beneath the asphalt should be excavated and disposed of properly. Shoring of the excavation wall next to the Storage Room will be required to safely remove the UGST. After the tank is removed, a backhoe is proposed to be used to remove as much of the contaminated soil adjacent to the building as possible without compromising the structural integrity of the nearby buildings. No soil is proposed to be excavated beneath the buildings. The excavation will be filled with compacted gravel and the loading dock and asphalt receiving areas restored to their original condition.

The UGST and a large portion of the contaminated soil would be removed using this proposed method. The remaining contaminated soil would be covered by the concrete loading dock which would prevent the percolation of rainwater and the potential

downward and lateral migration of TPH constituents in the vadose zone. The groundwater table is estimated to be some 50 feet below the bottom of the contaminated zone. The soil in the contaminated zone is a clayey silt to a silty clay. Approximately 20 feet of clean clayey silt underlies the bottom of the contaminated zone. Given the thickness and the estimated low permeability of the clayey soil, the diesel contamination under the building is not believed to pose a threat to groundwater in the area.

Mittelhauser Corporation and Riverside Community Hospital believe that this proposed method will provide the most cost-effective solution to minimize the potential environmental problems from the leaking UGST.

APPENDIX A

PROPOSED SITE ASSESSMENT PLAN

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

October 12, 1988

Mr. Joe Asbury
Riverside County Department of Health
Toxics Division
3636 University Avenue
Riverside, California 92501

Subject: Riverside Community Hospital- Proposed Site Assessment Plan

Dear Joe:

Mittelhauser Corporation was contracted by the Riverside Community Hospital to remove five underground storage tanks on the facility. The tank capacities and type of fuel stored in each are shown below:

Tank Volume (in gallons)	Type of Fuel Stored
550	Leaded gasoline
1,000	Leaded gasoline
1,000	# 2 diesel
3,000	# 2 diesel
6,000	# 2 diesel

All of the tanks have been precision tested, with four of them passing. The 3,000-gallon diesel tank failed the precision test and a subsequent soils investigation performed by Toxguard Systems, Inc. in July, 1987, identified that the subsurface soils around the tank contained significant levels of diesel contamination. The tank was found to have a high level leak near the manway and a second leak on the west side of tank approximately four feet north of the loading dock as shown on Figure 1.

PROPOSED SCOPE OF WORK

Prior to removing any of the tanks, the leaking diesel tank will be investigated. A site assessment plan will be implemented to determine the lateral and vertical extent of the diesel plume in the vadose zone soils and groundwater aquifer (if contaminated). This assessment will consist of a series of soil borings and the construction of monitoring wells (if contamination is found in or near the water table). Mittelhauser proposes to drill six borings around the tank as shown on Figure 1.

Two of these borings (B-1 and B-2) will be slant-drilled to assess the extent of any contaminated soils underlying the building. The third boring (B-3) will be drilled vertically as close as possible to the tank in the area of the second leak. A temporary monitoring well will be installed in this boring to assess the potential for groundwater contamination. The remaining three borings (B-4, B-5, and B-6) are located around the tank to characterize the extent of the plume. These borings will be drilled vertically. If diesel contamination is identified in borings B-4, B-5, and B-6, additional borings will be performed to further characterize the plume. Riverside County Health Department will be consulted prior to drilling any additional borings.

SAMPLING AND ANALYSIS PLAN

The borings will be drilled using a truck-mounted Mobile B-53 drill rig using eight-inch OD hollow-stem augers. Geosec, of San Bernardino, is to be contracted to perform the drilling. The borings will be drilled ten feet into the groundwater table. The estimated depth to groundwater beneath the site is 30 to 40 feet. Samples will be obtained using a California modified split-spoon sampler equipped with brass liners. A Mittelhauser Corporation geologist will supervise all drilling operations and log the borings. The sampling intervals will be dependent on the conditions encountered in each boring. The minimum sampling interval will be five feet. Discrete, individual samples will be taken to assess both the maximum contaminant concentration as well as the "clean" soil boundary. No compositing of samples will be performed. A minimum of one sample per boring will be submitted for laboratory analysis.

Soil cuttings from the borings will be drummed in DOT approved 55-gallon drums. Any soils determined to be hazardous under state law will be disposed of at an appropriate facility. The regulations of Rule 1166, passed by the South Coast Air Quality Management District, will be followed during this investigation.

All sampling will be conducted in accordance with EPA-approved methods listed in EPA publication SW-846. Proper equipment decontamination procedures and sample chain of custody requirements will be strictly followed. Soil and groundwater samples are to be analyzed for total petroleum hydrocarbons by EPA Method 418.1. Previous analyses were performed using Method 8015 and none of these parameters were detected. An independent California-certified laboratory, Enseco/CRL in Garden Grove, will perform the analyses.

A Foxboro Model 128 Organic Vapor Analyzer (OVA) will be used to screen the soil and groundwater samples for the presence of petroleum hydrocarbons. The OVA will also be utilized

for health and safety purposes to monitor the breathing space of the drill crew.

Monitoring wells will be constructed in accordance with EPA-approved methods listed in the EPA RCRA Ground Water Monitoring Technical Enforcement Guidance Document. Wells will be constructed using two-inch ID PVC Sch 40 flush-threaded well casing and 0.020-inch screen. Monterey No. 3 silica sand will be used for the filter pack. Bentonite pellets are to be utilized to form the two-foot impermeable seal. Volclay grout will be used above the bentonite to grade level to seal the annulus. The wells are to be completed at grade level with flush, locking traffic boxes.

CONCLUSIONS

Mittelhauser Corporation and Riverside Community Hospital wish to identify and mitigate any potential problems with this leaking underground storage tank as soon as possible. The hospital is currently undergoing renovations and the receiving dock near this tank is to be used heavily in the future. We wish to fully cooperate with the Riverside County Health Department and any other regulatory agencies to insure the timely, cost-effective remediation of this problem.

We apologize for the late notice of this submittal. The drilling activities for this assessment are scheduled to begin at 8:30 am on Friday, October 14, 1988. In the future, more suitable notice shall be given prior to initiating work. Thank you very much for your assistance and understanding on this matter. If you have any questions or comments please call me at (714) 472-2444.

Sincerely,

MITTELHAUSER CORPORATION

Robert J. Stechmann, Jr.

Robert J. Stechmann, Jr.
Project Geologist

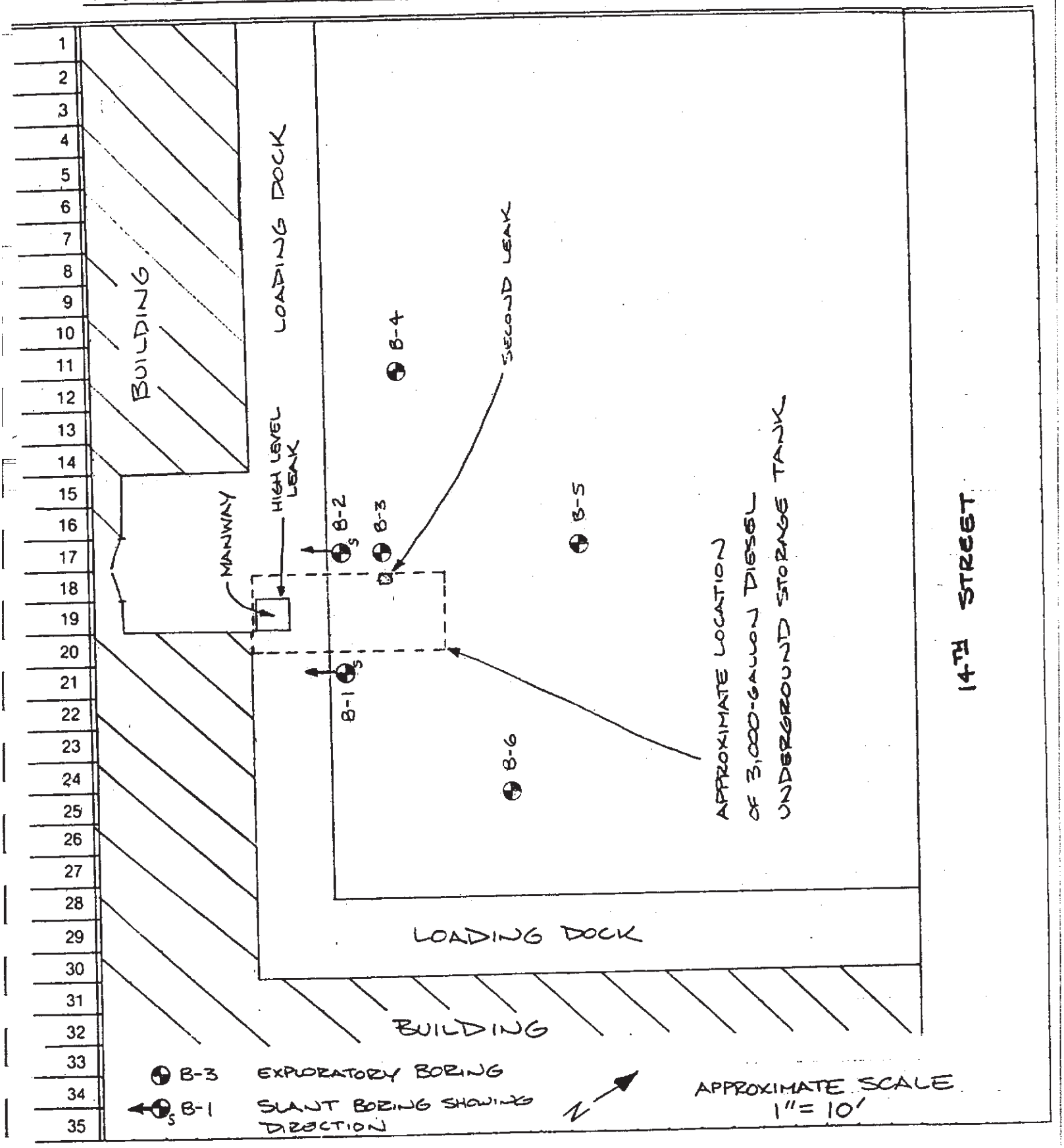
RJS:ld
1074BA
Enclosure: Figure 1-Proposed Boring Locations

cc: Earl Huckins, Riverside Community Hospital
David Adams, Riverside Community Hospital

MITTELHAUSER corporation

SHEET NO. 1 OF 1
PROJECT 1074-02
DATE 10/12/88
BY RJS CKD

PROPOSED BORING LOCATIONS
RIVERSIDE COMMUNITY HOSPITAL



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APPENDIX B

BORING LOGS

MITTELHAUSER corporation

BORING NO.: B-1	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 5.5' from loading dock, 3' S of tank C.L		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1348	DATE & TIME FINISHED: 10/14/88 1425
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 33.5 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 6		

DRILLED LENGTH (FT)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT	ML	BORING WITH SOIL BACKFILLED CUTTINGS				1348
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines						
5	0.7-12.0' SANDY SILT (ML)- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.			1		9/10	1354 7.5-8.5' OVA= 0 ppm
10	12.0-34.0' CLAYEY SILT (ML)- Med. brown to olive, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.			2		12/14	1400 12.5-13.5' OVA= 1.4 ppm
15	@ 17.5' same as above. Slight hydrocarbon odor noted.			3		12/17	1405 17.5-18.5' OVA~ 65 ppm
20	@ 22.5' same as above. Slight to moderate hydrocarbon odor detected.			4		10/11	1409 22.5-23.5' OVA= 150 ppm
25			GROUT				
30	@ 27.5' same as above. Slight to moderate hydrocarbon odor detected.			5		11/12	1418 27.5-28.5' OVA~ 120 ppm
	@ 32.5' same as above. No hydrocarbon odor found.			6		13/18	1425 32.5-33.5' OVA~ 3 ppm
35	T.D. = 33.5' @ 1425						
40	Boring backfilled by placing 25 gallons of Volclay grout from 23.5 to 33.5 ft and then clean soil cuttings compacted to grade level. Surface patched w/ asphalt.						
45	NOTE- THIS BORING WAS SLANT DRILLED AT AN ANGLE OF 33 DEGREES FROM VERTICAL. DEPTHS LISTED ON LOG ARE NOT CORRECTED FOR ACTUAL VERTICAL DEPTH.						
50							

MITTELHAUSER corporation

BORING NO.: B-2	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 5' from loading dock, 1.5' NE of tank		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1115	DATE & TIME FINISHED: 10/14/88 1300
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 59.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 9		

DRILLED LENGTH (FT)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	TYPE	BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING SOIL CUTTINGS				1115
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines						
5	0.7-47.5' CLAYEY SILT (ML)- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected from 0.7 to 12.5'.			1		10/12/13	1126 7.5-9.0' OVA= 0 ppm
10	@ 12.5' micaceous, grading sandier. Slight hydrocarbon odor.			2		8/9/14	1128 12.5-14.0' OVA= 56 ppm
15							
	@ 17.5' same as above. Moderate hydrocarbon odor noted.			3		10/10/12	1134 17.5-19.0' OVA= 180 ppm
20							
	@ 22.5' same as above. Moderate hydrocarbon odor detected.	ML		4		6/7/9	1139 22.5-24.0' OVA= 175 ppm
25							
	@ 27.5' same as above. Slight to moderate hydrocarbon odor detected.			5		10/12/15	1144 27.5-29.0' OVA~ 170 ppm
30							
	@ 32.5' same as above. Slight hydrocarbon odor found.			6		5/6/7	1148 32.5-34.0' OVA~ 100 ppm
35							
	@ 37.5' same as above, grading finer (more clay). No hydrocarbon odor detected in sample.			7		7/8/9	1154 37.5-39.0' OVA~ 5 ppm
40							
45	47.5-59.0' SILTY SAND (SM)- Reddish brown, fine to medium grained sand, minor fines and fine gravel, moist, moderately loose, chunks of	SM		8		7/12/17	1210 47.5-49.0' OVA~ 1 ppm
50							

MITTELHAUSER corporation

BORING NO.: B-2 PROJECT NO.: 1074-02 PROJECT NAME: Riverside Community Hospital-UGST Inv.

DRILLED LENGTH (FT)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	weathered granite. No hydrocarbon odor detected.						
55		SM	GROUT				
	@ 57.5′ same as above.			9		7/11/16	1227 57.5-59.0′ OVA= 1 ppm
60	T.D. = 59.0 ft @ 1227						
	Boring backfilled by placing 25 gallons of Volclay grout from 49.0 to 59.0 ft and then clean soil cuttings compacted to grade level. Surface patched w/ asphalt.						
65							
	NOTE- THIS BORING WAS SLANT DRILLED AT AN ANGLE OF 27.5 DEGREES FROM VERTICAL. DEPTHS LISTED ON LOG ARE NOT CORRECTED FOR ACTUAL VERTICAL DEPTH.						
70							
75							
80							
85							
90							
95							
100							

MITTELHAUSER corporation

BORING NO.: B-3	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 5' from loading dock, 1.5' NE of tank		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 0850	DATE & TIME FINISHED: 10/14/88 1020
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 61.5 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 15		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	TYPE	BLOW COUNT	REMARKS
	0-0.25' **ASPHALT**		BORING SOIL CUTTINGS				0850
	0.25-0.7' **ARTIFICIAL FILL**- Gravel (AB), minor fines			1		1/1/1	0853 4.5-6.0' OVA= 6 ppm
5	0.7-45.0' **CLAYEY SILT (ML)**- Med. reddish brown, minor fine-grained sand, some gravel, moderately firm, slightly cohesive, dry to moist Moderate hydrocarbon odor from 4.5 to 8.0'.			2		2/4/7	0902 7.5-9.0' OVA= 28 ppm
10	@ 8.0' more moist, grading sandier. Stronger hydrocarbon odor.			3		6/9/12	0906 10.0-11.5' OVA= 56 ppm
	@ 10' dry, friable, slightly indurated			4		4/7/10	0910 12.5-14.0' OVA= 95 ppm
15	@ 12.5' grading sandier. @ 17.5' same as above. Diminishing hydrocarbon odor noted.			5		3/7/10	0914 15.0-16.5' OVA~ 100 ppm
				6		5/8/10	0918 17.5-19.0' OVA~ 55 ppm
20	Sandy silt lens from 19 to 22'	ML					
	@ 22' silty clay encountered. Driller notes harder drilling.			7		5/7/8	0922 20.0-21.5' OVA= 42 ppm
25				8		3/4/7	0924 25.0-26.5' OVA= 8.2 ppm
30	@ 30' same as above. No hydrocarbon odor.			9		5/6/8	0927 30.0-31.5' OVA= 2 ppm
35	@ 35' same as above. No hydrocarbon odor.			10		3/4/5	0931 35.0-36.5' OVA~ 1 ppm
40	@ 40' same as above, no odor, grading sandier.			11		5/5/6	0938 40.0-41.5' OVA~ 1 ppm
45	45.0-61.5 **SILTY SAND (SM)**- Reddish brown with some orange, fine to medium grained sand, minor fines and fine gravel, dry to moist, mod loose, chunks of weathered granite	SM		12		6/7/9	0943 45.0-46.5' OVA~ 1 ppm
50	No hydrocarbon odor detected.			13		6/8/11	0947

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BORING NO.: B-3 PROJECT NO.: 1074-02 PROJECT NAME: Riverside Community Hospital-UGST Inv.

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
			GROUT				50.0-51.5' OVA~ 1 ppm
55	@ 55' same as above, grading coarser.	SM		14		8/9/13	0950 55.0-56.5' OVA~ 1 ppm
60	@ 60' same as above, coarser grained.			15		9/15/20	0955 60.0-61.5' OVA~ 1 ppm
	T.D. = 61.5 ft @ 1227						
65	Boring backfilled by placing 25 gallons of Volclay grout from 50.0 to 61.5 ft and then clean soil cuttings compacted to grade level. Surface patched w/ asphalt.						
70							
75							
80							
85							
90							
95							
100							

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BORING NO.: B-4	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 9' from loading dock, 8' SE of tank		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1548	DATE & TIME FINISHED: 10/14/88 1625
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 26.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 4		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING BACKFILLED WITH SOIL CUTTINGS				1548
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines						
5	0.7-12.0' SANDY SILT (ML)- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.						
10				1		8/10	1552 10.0-11.0' OVA~ 1 ppm
	12.0-26.5' CLAYEY SILT (ML)- Med. brown to olive, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.	ML					
15				2		7/8	1557 15.0-16.0' OVA~ 1 ppm
20	@ 20' same as above. No odor detected.			3		8/8	1602 20.0-21.0' OVA~ 1.5 ppm
25	@ 25' same as above. No odor identified.			4		8/11	1608 25.0-26.0' OVA= 3 ppm
	T.D. = 26.0' @ 1610						
30	Boring backfilled with clean soil cuttings and compacted w/ drill rig. Surface patched w/ asphalt.						
35							
40							
45							
50							

MITTELHAUSER corporation

BORING NO.: B-5	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 23' from loading dock, 0.5' N of tank		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1510	DATE & TIME FINISHED: 10/14/88 1540
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 26.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 4		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT	ML	BORING BACKFILLED WITH SOIL CUTTINGS				1510
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines						
5	0.7-12.0' SANDY SILT (ML)- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.						
10				1		7/8	1515 10.0-11.0' OVA~ 0 ppm
	12.0-26.5' CLAYEY SILT (ML)- Med. brown, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.						
15				2		8/8	1523 15.0-16.0' OVA~ 0.5 ppm
20	@ 20' same as above. No odor detected.			3		8/9	1530 20.0-21.0' OVA~ 1.5 ppm
25	@ 25' same as above. No odor identified.			4		7/10	1535 25.0-26.0' OVA= 1.7 ppm
	T.D. = 26.0' @ 1540						
30	Boring backfilled with clean soil cuttings and compacted w/ drill rig. Surface patched w/ asphalt.						
35							
40							
45							
50							

MITTELHAUSER corporation

BORING NO.: B-6	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 8.5' from loading dock, 10' from tank C.L.		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1618	DATE & TIME FINISHED: 10/14/88 1640
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 21.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 3		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' ASPHALT		BORING WITH SOIL CUTTINGS				1618
	0.25-0.7' ARTIFICIAL FILL- Gravel (AB), minor fines						
5	**0.7-12.0' SANDY SILT (ML)**- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.	ML	BACKFILLED	1		5/6	1626 10.0-11.0' OVA~ 1 ppm
10							
	12.0-21.0' CLAYEY SILT (ML)- Med. brown, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.						
15				2		6/6	1628 15.0-16.0' OVA~ 1 ppm
20	@ 20' same as above. No odor detected.			3		6/5	1631 20.0-21.0' OVA~ 1 ppm
	T.D. = 21.0' @ 1631						
25	Boring backfilled with clean soil cuttings and compacted w/ drill rig. Surface patched w/ asphalt.						
30							
35							
40							
45							
50							

MITTELHAUSER corporation

BORING NO.: B-7	PROJECT NO.: P1074-02	PROJECT NAME: Riverside Community Hospital- UGST Inv.	
BORING LOCATION: 4.5' from end of tank, 12' from load dock		ELEVATION AND DATUM: ~ 825 ft MSL	
DRILLING AGENCY: Geosec	DRILLER: John	DATE & TIME STARTED: 10/14/88 1641	DATE & TIME FINISHED: 10/14/88 1700
DRILLING EQUIPMENT: Mobile B-53 w/ 8" OD Hollow-stem augers			
COMPLETION DEPTH: 21.0 ft	BEDROCK DEPTH: Not Encountered	LOGGED BY: B. Stechmann	CHECKED BY: D. Collins
FIRST WATER DEPTH: N/E	NO. OF SAMPLES: 2		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOW COUNT	REMARKS
	0-0.25' **ASPHALT**						1641
	0.25-0.7' **ARTIFICIAL FILL**- Gravel (AB), minor fines						
5	0.7-12.0' **SANDY SILT (ML)**- Med. brown, minor fine-grained sand and clay, moderately firm, slightly cohesive, moist. No hydrocarbon odor detected.	ML	G R O U T				
10	12.0-21.0' **CLAYEY SILT (ML)**- Med. brown, moderately cohesive and firm, moist, micaceous. No hydrocarbon odor detected.						
15				1		4/5	1643 15.0-16.0' OVA~ 1 ppm
20	@ 20' same as above. No odor detected.			2		6/6	1650 20.0-21.0' OVA~ 1 ppm
	T.D. = 21.0' @ 1650						
25	Boring backfilled with 25 gallons of Volclay grout tremied from 1 to 21 feet. Clean soil placed from 0.5 to 1 feet. Surface patched with asphalt.						
30							
35							
40							
45							
50							

APPENDIX C

ANALYTICAL LABORATORY RESULTS

MITTELHAUSER corporation

UGST Leak Investigation
Riverside Community
Hospital

October 1988
Rev: 0
1074RB

ENSECO/CRL LABORATORY RESULTS

SUBMITTED BY MITTELHAUSER CORPORATION

FORMAL LAB REPORT UNAVAILABLE AT ISSUANCE OF THIS REPORT.

Enseco

TO: FAX #(714) 472 2418

NAME Bob Stechmann

COMPANY Nittlehauser Corp

CITY Laguna Hills, CA

FROM: NAME: Ferol Kimble

COMPANY: Enseco-CRL

NUMBER OF PAGES (INCLUDING THIS COVER PAGE) 1

If you do not receive all pages, please phone (714)898-6370.

SPECIAL INSTRUCTIONS Analysis No. 829101

Riverside Community Hospital

		mg/kg
1674-02	001	20,000
	002	150
	003	25,000
	004	31
	005	8
	006	17,000
	007	7,500
	008	23,000
	009	15
	010	8
	011	10
	012	ND (1.)
	013	ND (1.)

OUR FACSIMILE INFORMATION: Sharp FO-620, (714)891-5917

7440 Lincoln Way
Garden Grove, California 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL • FAX: (714) 891-5917

MITTELHAUSER corporation
23272 MILL CREEK ROAD, SUITE 300
LAGUNA HILLS, CALIFORNIA 92653
(714) 472-2444

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 1074-02

PROJECT NAME: Riverside Community Hospital

SAMPLED BY: (PRINTED AND SIGNATURE) Bob Stechmann / Bob Stechmann

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): EPA METHOD 418.1	PRESERVATIVE	REMARKS
1074-02-001	10/14/88		SOIL	B-3, S-5 15-16.5'	1	X 20,000	ICE	
1074-02-002				B-3, S-8 25-26.5'	1	X 150		
1074-02-003				B-2, S-3 17.5-19'	1	X 25,000		
1074-02-004				B-2, S-6 32.5-34'	1	X 34		
1074-02-005		1134		B-2, S-7 37.5-39'	1	X 8		
1074-02-006		1405		B-1, S-3 17.5-19'	1	X 17,000		PLEASE INCLUDE
1074-02-007		1409		B-1, S-4 22.5-25'	1	X 7,500		WHITE COPY OF
1074-02-008		1418		B-1, S-5 27.5-29'	1	X 22,000		THIS RECORD
1074-02-009		1425		B-1, S-6 32.5-33.5'	1	X 15		W/ LAB REPORT
1074-02-010		1530		B-5, S-3 20-21'	1	X 8		
1074-02-011		1602		B-4, S-3 20-21'	1	X 10		
1074-02-012		1628		B-6, S-2 15-16'	1	X ND		INVOICE PROJECT
1074-02-013		1650		B-7, S-2 20-21'	1	X ND		#1074-02 AND
								P.O. # 286-1074-02-03

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)		
Bob Stechmann	10/17/88	0955		TOTAL NO. OF SAMPLES (THIS SHIPMENT) 13	LABORATORY: ENSECO/CRL
				TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 13	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: FERROL KIMBLE	LABORATORY PHONE NUMBER: (714) 898-6370
RELINQUISHED BY: (SIGNATURE)	DATE 10/17/88	TIME 0955	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO	

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
CANARY, LABORATORY
PINK, CLIENT
GOLD, PROJECT FILE

REMARKS: PLEASE CONTACT BOB STECHMANN @ (714) 472-2444 W/ VERBAL RESULTS, ASAP.

MITTELHAUSER corporation

UGST Leak Investigation
Riverside Community
Hospital

October 1988
Rev: 0
1074RB

ANACON LABS LABORATORY RESULTS

SUBMITTED BY TOXGUARD SYSTEMS, INC.

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 26, 1987

LAB NO. 7-09-30-752
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample # 2

SAMPLE POINT: Riverside Community Hospit

FLOW RATE: .....

TIME: Date Received 9/30/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis	
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	19,800	mg/Kg

Additional testing performed 10/16/87 per Dennis Zafuto request for Riverside Environmental Health.

Note: All G.C. Result Performed by Weck Laboratories.

Mike Sandiez
ANALYST

Bruce Klingler
LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes EPA

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 26, 1987

LAB NO. 7-09-30-754
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil # 4

SAMPLE POINT: Riverside Comunity Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis	
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	20,500	mg/Kg

Note: All G.C. Results Performed by Weck Laboratories.

Mike Simkiz
ANALYST

Bruce Klingler
LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes EPA

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9728

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

October 26, 1987

LAB NO. 7-09-30-756
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil # 6

SAMPLE POINT: Riverside Comunity Hospital

FLOW RATE: .....

TIME: Date Received 9/20/87

Obtained by Toxguard

Sample received under iced conditions with seal intact.

	Analysis
Total Recoverable Petroleum Hydrocarbons EPA Method 418.1	15,200 mg/Kg

Note: All G.C. Results Performed by Weck Laboratories.

Nikki Sandin
ANALYST

Bruce Klingler
LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes EPA

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 1 6 1987

October 13, 1987

LAB NO. 7-09-30-755
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample E-2 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Jim Hitchcock
ANALYST

SW

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 16 1987

October 13, 1987

LAB NO. 7-09-30-754

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample E-6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

---

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Hitchcock
ANALYST
SW

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs

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METAL FINISHING SOLUTION ANALYSIS
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Riverside, California 92501
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Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 16 1987

October 13, 1987

LAB NO. 7-09-30-756

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample W-2 Ft

SAMPLE POINT: Riverside Community Hospital
4445 Magnolia Ave.

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Hibbert
ANALYST

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 16 1987

October 13, 1987

LAB NO. 7-09-30-756

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample W-6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tina Hitchcock
ANALYST

LABORATORY DIRECTOR

SW

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

October 13, 1987

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 16 1987

LAB NO. 7-09-30-753

ATTENTION: Dennis Zafuto

PERMIT NO. .....

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample N-W-2 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

---

	Analysis
Nonhalogenated Volatile Organics	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Jim Hitchcock
ANALYST

SW

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

AnaCon Labs

PLATING SOLUTION ANALYSIS
METAL FINISHING SOLUTION ANALYSIS
24 HOUR SERVICE

713 North Main Street
Riverside, California 92501
Telephone 1(714) 781-9724

Toxguard Systems
795 So. Lugo Ave.
San Bernardino, CA 92408

OCT. 16 1987

October 13, 1987

LAB NO. 7-09-30-752
PERMIT NO. .....

ATTENTION: Dennis Zafuto

ANACON LABORATORIES CERTIFICATE # 101

SAMPLE TYPE: Soil Sample H-W- 6 Ft

SAMPLE POINT: Riverside Community Hospital

FLOW RATE: .....

TIME: Date Received 9/30/87

Received with seal intact under iced conditions. Obtained by customer

---

	Analysis
Nonhalogenated Volatile Organics EPA Method 8015	None Detected

Note: All G.C. Results Performed by Weck Laboratories.

Tim Hitchcock
SW ANALYST

LABORATORY DIRECTOR

All test methods are in accordance to current editions of Standard and Methods for Chemical Analysis of Water and Wastes, EPA.

Riverside County
Local Oversight Program
Electronic Case File

Site Name: Riverside Community Hospital

Site Number: 871557

Electronic File #: 6

File organized chronologically starting with #1

APPENDIX D

TANK INTEGRITY TEST RESULTS

DENNIS BOB

TOXGUARD SYSTEMS, INC.

795 SOUTH LUGO AVENUE, SAN BERNARDINO, CA 92408 714/884-9002 1-800-345-1585

July 10, 1987

Riverside Community Hospital
4445 Magnolia Ave
Riverside California

Dear Sir:

Enclosed please find copies of our worksheets for testing of your underground storage tanks.

Test Date: 7/01/87
Tester: Pat Harris 414812631
John Johnson 414812632

#1 West, 1,000 gallon #2 diesel tank meets the NFPA criteria of plus or minus .050 gph. Tank shows a loss of .018 gph. Tank system tests tight.

#2 South, 6,000 gallon #2 diesel tank meets the NFPA criteria of plus or minus .050 gph. Tank shows a loss of .0476 gph. Tank system tests tight.

If you should have any questions, please feel free to call.

Toxguard Systems, Inc.

RETEST No X Yes ___

Data Chart for Tank System Tightness Test

petro tite TANK TESTER

DATE: 7/1/87

1. OWNER Property ☒ Tank(s) ☒	Name: Riverside Community Hosp. Address: 4445 Magnolia Ave Riverside CA. Representative: Dave Adams. Telephone: 788-3143
2. OPERATOR	Name: SAME. Address: Telephone:
3. REASON FOR TEST (Explain Fully)	To Determine Tightness of: Underground Isolated Tanks THRU Underground Tank/system
4. WHO REQUESTED TEST AND WHEN	Name: Dave Adams & Earl Huckins. Title: Asst Dir. Plant Ops. Company or Affiliation: Date: Address: Telephone:
5. WHO IS PAYING FOR THIS TEST?	Company, Agency or Individual: Riverside Community Hosp. Person Authorizing: Title: Telephone: Billing Address: City: State: Zip: Attention of: Order No: Other Instructions:

6. TANK(S) INVOLVED

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx. Age	Steel/Fiberglass
#1 west	1,000.	unk	#2 Diesel	25 yrs	STL
#2 South	6,000	unk	#2 Diesel	25 yrs	STL
#3 EAST	3,000	unk	#2 Diesel	25 yrs	STL

7. INSTALLATION DATA

Location (North inside driveway, Rear of station, etc.)	Cover (Concrete, Black Top, Earth, etc.)	Fills (Size, Tilefill make, Drop tubes, Remote Fills)	Vents (Size, Manifolded)	Siphones (Which tanks?)	Pumps (Suction, Remote, Make if known)
3 sides of physical plant	Asph	2" & 4"	2"	—	suct

8. UNDERGROUND WATER

Depth to the Water table > 20' per client.

Is the water over the tank? ☐ Yes ☒ No

9. FILL-UP ARRANGEMENTS

Tanks to be filled 1000 hr. 6/30 Date Arranged by DAVE ADAMS Name Telephone

Extra product to "top off" and run TSTT. How and who to provide? Consider NO Lead.

Terminal or other contact for notice or inquiry ___ Company Name Telephone

10. CONTRACTOR, MECHANICS, any other contractor involved

11. OTHER INFORMATION OR REMARKS

Test Results: Advised DAVE ADAMS

Visitors: —

Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test etc.

12. TEST RESULTS

Tests were made on the above tank systems in accordance with test procedures prescribed for petro tite as detailed on attached test charts with results as follows:

Tank Identification	Tight	Leakage Indicated	Date Tested
#1 west	YES	-.018 GAL/HOUR	7/1/87
#2 SOUTH	YES.	-.0476 GAL/HOUR	7/1/87 (HORNE)
NOTES #3 EAST	NOT TESTED - FUEL LINES IN REPAIR OR REPLACEMENT		

13. CERTIFICATION

This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

7/1/87 Date

1485 Serial No. of Therma Sensor

PATRICK HARRIS — Technicians

JOHN JOHNSON

Toxguard Systems — Testing Contractor or Company By Signature

795 S. Lugo Ave. San Berd. — Address

92408 (714) 884-9002

14. [illegible] 4445 [illegible] [illegible] Ga 7/1/[illegible]

Name of Supplier, Owner or Dealer | Address (No. and Street(s)) | City | State | Date of Test

15. TANK TO TEST

[illegible] #1

Identify by position

[illegible]

Brand and Grade

16. CAPACITY

Nominal Capacity [illegible] Gallons

By most accurate capacity chart available [illegible] Gallons

Is there doubt as to True Capacity? ☐

See Section "DETERMINING TANK CAPACITY"

From

- ☐ Station Chart
- ☐ Tank Manufacturer's Chart
- ☐ Company Engineering Data
- ☐ Charts supplied with petro tite
- ☒ Other [illegible]

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up [illegible] to ⅛ in. [illegible] Gallons

Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

Tank Diameter [illegible]

	Stick Readings to ⅛ in.	Gallons	Total Gallons as. Reading
Inventory			[illegible]
H_2O			[illegible]
Top-Off			[illegible]
Product in full tank (up to fill pipe)			[illegible]

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (26).

☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM

☒ Stage I

☐ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to Grade* ..... [illegible]"

Add 30" for 4" L ..... "

Add 24" for 3" L or air seal ..... "

Total tubing to assemble Approximate ..... "

20. EXTENSION HOSE SETTING

Tank top to grade* ..... [illegible]"

Extend hose on suction tube 6" or more below tank top ..... "

*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK

Is Today Warmer? ( ) Colder? ( ) ___ °F Product in Tank ___ °F Fill-up Product on Truck ___ °F Expected Change (+ or −)

22. Thermal-Sensor reading after circulation [illegible] digits [illegible] Nearest °F

23. Digits per °F in range of expected change [illegible] digits

24. [illegible] (total quantity in full tank (16 or 17)) × [illegible] (coefficient of expansion for involved product) = [illegible] (volume change in this tank per °F) gallons

25. [illegible] (volume change per °F (24)) ÷ [illegible] (Digits per °F in test Range (23)) = [illegible] (Volume change per digit. Compute to 4 decimal places.) This is test factor (a) .0014

Observed Gravity: 34.1

Observed Temperature: 77.6

Corr. API Gravity: [illegible]

Coef. of Expansion: [illegible]

	DR	EZ	EC	OR	EE

Customer: RIVERSIDE COUNTY HOSPITAL 4445 MAGNOLIA AVE. RIVERSIDE, CA. 7-1-87

Contact: DAVE JAMES Phone: 788-3140

Tank: _____ JULY 1, 1987

Location/ capacity/product .0016 Test Date

Time	Reading #	Chart Start	Chart End	Divisions Gain	Divisions Loss	Variance Gain Loss	Comput. Var x(a)	Temperature start	Temperature end	VARIANCE	Var x(b)	Net Chng.
1000	1	51	52	+1			+.0016	71.374	71.373	-.001	-.0027	+.0043
1015	2	52	52	±0			±.0000	[illegible]	.372	-.001	-.0027	+.0027
1030	3	52	37		-15		-.0240	.372	.372	±.000	±.0000	-.0240
1045	4	37	15		-22		-.0352	.372	.372	±.000	±.0000	-.0352
1100	5	RESET HERE 89	74		-15		-.0240	.372	.373	+.001	+.0027	-.0267
1115	6	74	62		-12		-.0192	.373	.373	±.0000	±.0000	-.0192
1130	7	62	52		-10		-.0160	.373	.372	-.001	-.0027	-.0133
1145	8	52	46		-6		-.0096	.372	.372	±.000	±.0000	-.0096
1200	9	46	38		-8		-.0130	.372	.371	-.001	-.0027	-.0103
1215	10	38	29		-9		-.0144	.372	.372	±.000	±.0000	-.0144

REMARKS:

14
16
15.5
45.5
3145.5

Chart Cal. ☐ .050 ☒ .025 ÷ 15.2 chart units = .0016447 (a)

Temp Cal. .000 / Tank Cap. X .0002445 Coef. Exp = 2.7264 (b)

Obs. Gravity: 35.6

Obs. Temp: 80°F

Corr. API Gravity: 35.4

Coeff. of Expansion: .0002445

27. DATE / TIME (24 hr.)	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	Standpipe Level in Inches: Beginning of Reading	Standpipe Level in Inches: Level to which Restored	32. Product in Graduate: Before Reading	Product in Graduate: After Reading	Product Replaced (−) / Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower − (c)	37. Computation (c) + (e) = Expansion + Contraction − .0014	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (−) #33(V) − #37(I)	At High Level record Total End Deflection / At Low Level compute Change per Hour (API PA criteria)
	1000 DIESEL WEST #1											
0710	Arrived at sight; Took tank burial measurments; checked for water; took inventory of product. Prepared the area for testing.											
0710	Top off product provided by customer: Approx. 75 Gallons											
0730	Set up test equipment and started circulation pump. Bled air at circ. pump, all system hoses and fittings, and											
35	Set up Thermal sensor. Replaced and load tested battery. Self test: 16563 (15) Serial # 1485											
	1 KHP Filling											
1000	First Sensor Reading	1	---	42	---	.715	---	16845	---	---	---	
15	Started High Level Test	2	41.7	42	.715	.710	−.005	890	+45	+.063	−.058	
30	" " " Cont'd	3	42.5	42	.710	.735	+.015	929	+39	+.055	[illegible]	
45	" " " "	4	[illegible]	42	.735	.745	+.020	965	+36	+.050	−.030	
1100	↓ ↓	5	42.5	42	.745	[illegible]	[illegible]	169[illegible]	+34	+.048	−.002	
01	DROP TO LOW LEVEL	6	—	~~42~~ 12	—	.635	—	16[illegible]	—	—	—	
15	LOW LEVEL TEST	7	14.2	12	.635	.735	+.100	17033	+34	+.048	+.052	
30	↓ ↓	8	13.2	12	.735	.790	+.055	070	+37	+.052	+.003	
45	↓ ↓	9	13.0	12	.790	.835	+.045	103	+33	+.046	−.001	+.002
1200	↓ ↓	10	13.0	12	.835	.880	+.045	137	+34	+.048	−.003	−.001
15	↓ ↓	11	13.0	12	.880	.925	+.045	174	+37	+.052	−.007	−.008
30	↓ ↓	12	13.0	12	.925	.960	+.045	211	+37	+.052	−.007	
				SYSTEM "TIGHT" — LOSS RATE INDICATOR (−.018 GPH)								

A Geological Systems Evaluation Company

UNDERGROUND STORAGE TANK TEST CERTIFICATION

Tank Owner: Riverside Community Hospital

Contact Person: Dave Adams

Address: 4445 Magnolia

City, State: Riverside, CA 92501

Telephone: 714-788-3143

Tank Address: Same

City, State: Same

Test Method: Horner Ezy Chek

Test Date: 2-22-88

Tank	Capacity	Product	High Test	Low Test
#4	1000 gal	Water/2"Fuel	-.037236 gal/hr	
#5	550 gal	Reg Gas	-.016154 gal/hr	

Remarks: Tanks are within guidelines of: California Administration Code Title 23 Waters Subchapter 16 Underground Tank Regulations Section 2643; paragraphs a through d

Approval: Jim Tharp Signature: Jim Tharp

237 South Waterman Avenue • San Bernardino California 92408 • Telephone 714 • 885 • 7072

OK for mailing
10-13-88
JSA

MITTELHAUSER corporation

23272 Mill Creek Drive, Suite 300
Laguna Hills, California 92653
(714) 472-2444

October 12, 1988

Mr. Joe Asbury
Riverside County Department of Health
Toxics Division
3636 University Avenue
Riverside, California 92501

Subject: Riverside Community Hospital- Proposed Site Assessment Plan

Dear Joe:

Mittelhauser Corporation was contracted by the Riverside Community Hospital to remove five underground storage tanks on the facility. The tank capacities and type of fuel stored in each are shown below:

Tank Volume (in gallons)	Type of Fuel Stored
550	Leaded gasoline
1,000	Leaded gasoline
1,000	# 2 diesel
3,000	# 2 diesel
6,000	# 2 diesel

All of the tanks have been precision tested, with four of them passing. The 3,000-gallon diesel tank failed the precision test and a subsequent soils investigation performed by Toxguard Systems, Inc. in July, 1987, identified that the subsurface soils around the tank contained significant levels of diesel contamination. The tank was found to have a high level leak near the manway and a second leak on the west side of tank approximately four feet north of the loading dock as shown on Figure 1.

PROPOSED SCOPE OF WORK

Prior to removing any of the tanks, the leaking diesel tank will be investigated. A site assessment plan will be implemented to determine the lateral and vertical extent of the diesel plume in the vadose zone soils and groundwater aquifer (if contaminated). This assessment will consist of a series of soil borings and the construction of monitoring wells (if contamination is found in or near the water table). Mittelhauser proposes to drill six borings around the tank as shown on Figure 1.

Two of these borings (B-1 and B-2) will be slant-drilled to assess the extent of any contaminated soils underlying the building. The third boring (B-3) will be drilled vertically as close as possible to the tank in the area of the second leak. A temporary monitoring well will be installed in this boring to assess the potential for groundwater contamination. The remaining three borings (B-4, B-5, and B-6) are located around the tank to characterize the extent of the plume. These borings will be drilled vertically. If diesel contamination is identified in borings B-4, B-5, and B-6, additional borings will be performed to further characterize the plume. Riverside County Health Department will be consulted prior to drilling any additional borings.

SAMPLING AND ANALYSIS PLAN

The borings will be drilled using a truck-mounted Mobile B-53 drill rig using eight-inch OD hollow-stem augers. Geosec, of San Bernardino, is to be contracted to perform the drilling. The borings will be drilled ten feet into the groundwater table. The estimated depth to groundwater beneath the site is 30 to 40 feet. Samples will be obtained using a California modified split-spoon sampler equipped with brass liners. A Mittelhauser Corporation geologist will supervise all drilling operations and log the borings. The sampling intervals will be dependent on the conditions encountered in each boring. The minimum sampling interval will be five feet. Discrete, individual samples will be taken to assess both the maximum contaminant concentration as well as the "clean" soil boundary. No compositing of samples will be performed. A minimum of one sample per boring will be submitted for laboratory analysis.

Soil cuttings from the borings will be drummed in DOT approved 55-gallon drums. Any soils determined to be hazardous under state law will be disposed of at an appropriate facility. The regulations of Rule 1166, passed by the South Coast Air Quality Management District, will be followed during this investigation.

All sampling will be conducted in accordance with EPA-approved methods listed in EPA publication SW-846. Proper equipment decontamination procedures and sample chain of custody requirements will be strictly followed. Soil and groundwater samples are to be analyzed for total petroleum hydrocarbons by EPA Method 418.1. Previous analyses were performed using Method 8015 and none of these parameters were detected. An independent California-certified laboratory, Enseco/CRL in Garden Grove, will perform the analyses.

A Foxboro Model 128 Organic Vapor Analyzer (OVA) will be used to screen the soil and groundwater samples for the presence of petroleum hydrocarbons. The OVA will also be utilized

for health and safety purposes to monitor the breathing space of the drill crew.

Monitoring wells will be constructed in accordance with EPA-approved methods listed in the EPA RCRA Ground Water Monitoring Technical Enforcement Guidance Document. Wells will be constructed using two-inch ID PVC Sch 40 flush-threaded well casing and 0.020-inch screen. Monterey No. 3 silica sand will be used for the filter pack. Bentonite pellets are to be utilized to form the two-foot impermeable seal. Volclay grout will be used above the bentonite to grade level to seal the annulus. The wells are to be completed at grade level with flush, locking traffic boxes.

CONCLUSIONS

Mittelhauser Corporation and Riverside Community Hospital wish to identify and mitigate any potential problems with this leaking underground storage tank as soon as possible. The hospital is currently undergoing renovations and the receiving dock near this tank is to be used heavily in the future. We wish to fully cooperate with the Riverside County Health Department and any other regulatory agencies to insure the timely, cost-effective remediation of this problem.

We apologize for the late notice of this submittal. The drilling activities for this assessment are scheduled to begin at 8:30 am on Friday, October 14, 1988. In the future, more suitable notice shall be given prior to initiating work. Thank you very much for your assistance and understanding on this matter. If you have any questions or comments please call me at (714) 472-2444.

Sincerely,

MITTELHAUSER CORPORATION

Robert J. Stechmann, Jr.

Robert J. Stechmann, Jr.
Project Geologist

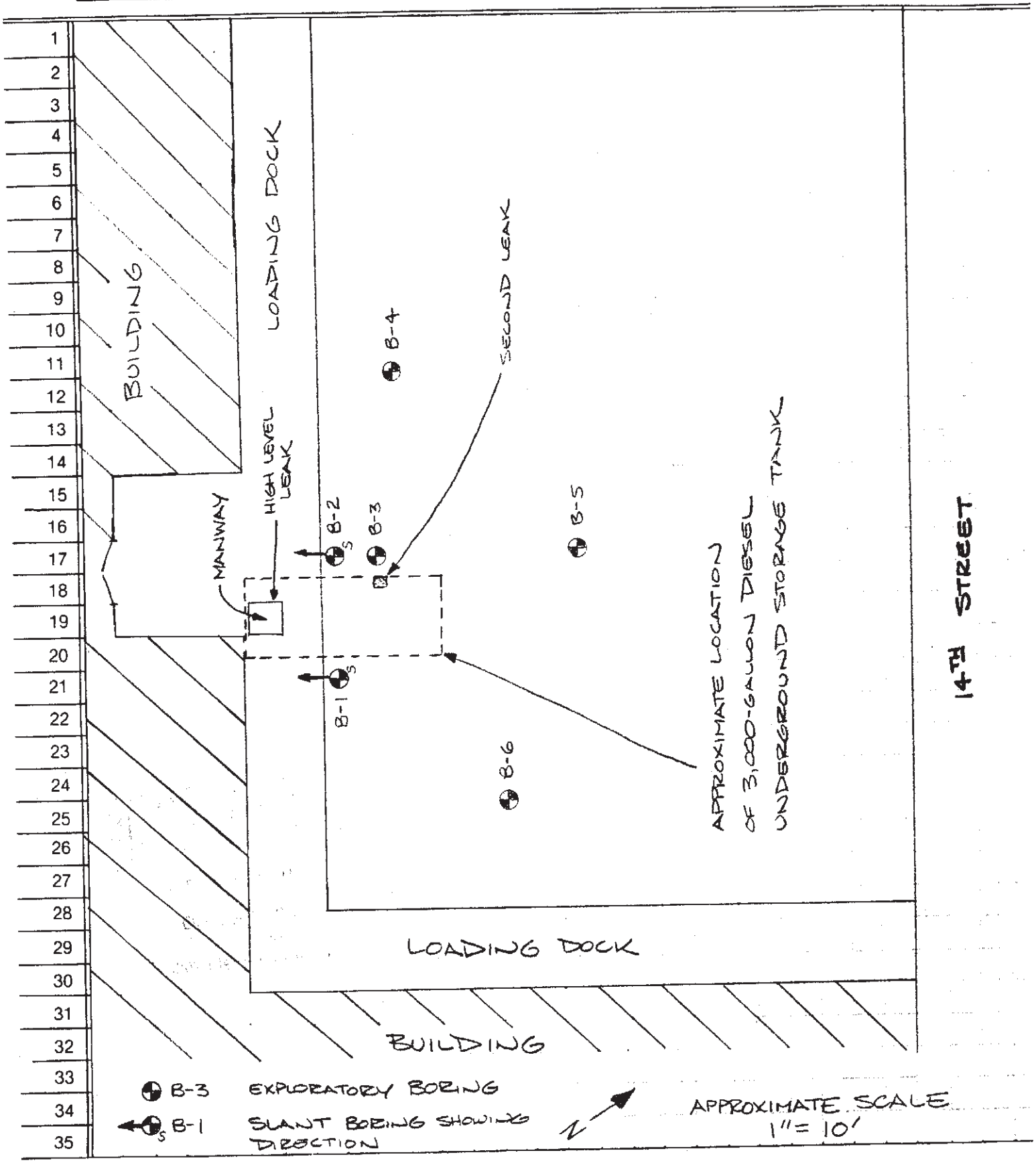
RJS:ld
1074BA
Enclosure: Figure 1-Proposed Boring Locations

cc: Earl Huckins, Riverside Community Hospital
David Adams, Riverside Community Hospital

MITTELHAUSER corporation

SHEET NO. 1 OF 1
PROJECT 1074-02
DATE 10/12/88
BY RJS CKD

PROPOSED BORING LOCATIONS
RIVERSIDE COMMUNITY HOSPITAL



BEST PRINTING, INC. • (714) 951-4636

Department of Health, Environmental Health Servic
Hazardous Materials Branch
FIELD LOG

DATE 10/8
SHEET

ACILITY NAME Riverside Community Hospital PROJECT NUMBER

DDRESS 4445 Magnolia Ave

ONTACT PERSON TELEPHONE

IRE PERSONNEL HEALTH PERSONNEL

Mittelhauser Corporation to do drilling

Drilling to go as planned.

an inspection of the drilling was done by
S. Stites and J. Asbury

The operation took good

see attached report

LEVINE·FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

December 10, 1987
L·F 87P-171

Mr. Joe Asbury
Riverside County Health Department
3636 University Ave.
Riverside, California 92501

Re: Proposed Hydrogeologic Investigation at Riverside Community Hospital

Dear Mr. Asbury:

This letter is in response to our telephone conversation yesterday morning regarding Levine·Fricke's proposal for a hydrogeological investigation of soil and ground water in the vicinity of an underground diesel storage tank at the Riverside Community Hospital. The purpose of this investigation is to assess the extent of possible soil contamination in the vicinity of an underground diesel storage tank at the subject facility and to investigate whether or not the fuel reportedly found in the soil beneath the tank is present in the shallow ground water beneath the site. The investigation will include the completion of three (3) soil borings to a depth of approximately 60 to 70 feet with soil samples collected at approximately five foot intervals, the collection of a ground-water sample, chemical analysis of collected samples to detect the presence of diesel fuels, and the preparation of a technical report describing the sampling and analysis results.

When the soil borings are completed, they will be either completed as monitoring wells or abandoned. To abandon a soil boring, a cement-bentonite grout will be pressure-grouted or tremied into the boring from the bottom up to the top of the borehole. The grout will consist of cement mixed with approximately 3-5% bentonite.

If a decision is made to complete the vertical boring as a monitoring well, Levine·Fricke will utilize the following installation and development procedures. The proposed monitoring well(s) will be constructed using threaded, four-inch diameter, factory slotted PVC casing from about the bottom of the boring up to at least the water table. Blank casing will be installed above this interval. The well annulus outside the perforated interval will be backfilled with an appropriately-sized sand pack. Bentonite pellets and a cement-bentonite slurry will be placed above the sand pack to the land surface to seal the annular space in the borehole. Typical monitoring well construction is shown in Figure 1.

4019 WESTERLY PLACE, SUITE 103
NEWPORT BEACH, CA 92660
(714) 955-1390

Other offices in OAKLAND

A protective, locking steel cover will then be placed over the top of the casing. The well elevation will be surveyed to the nearest 0.01 foot and referenced to Mean Sea Level to allow accurate measurement of the ground-water elevation and flow direction.

The monitoring well(s) will be developed by pumping, surging and/or bailing to remove fine particles near the well screen and improve hydraulic communication with the surrounding formation. Water clarity, pH, temperature, specific conductance and volume extracted will be measured during the development process to gauge its progress.

Regarding chemical analysis of soil and water samples for diesel fuels, we recommend using the modified EPA Method 8015 (gas chromatography with a flame ionization detector (GC/FID)) for this project. This method is the technique requested by the California Department of Health Services for distillate fuels (see Appendix B, State of California Leaking Underground Fuel Tank Field Manual, July, 1987). As indicated in that manual, EPA Method 418.1 is applicable but has a significant deficiency since light fuel fractions are lost. The manual specifies that this method should be used primarily as a survey tool. If you need further detailed information on the recommended chemical analysis methodology, please contact Dr. Jack Worthington of West Coast Analytical Service, Inc. at (213) 948-2225.

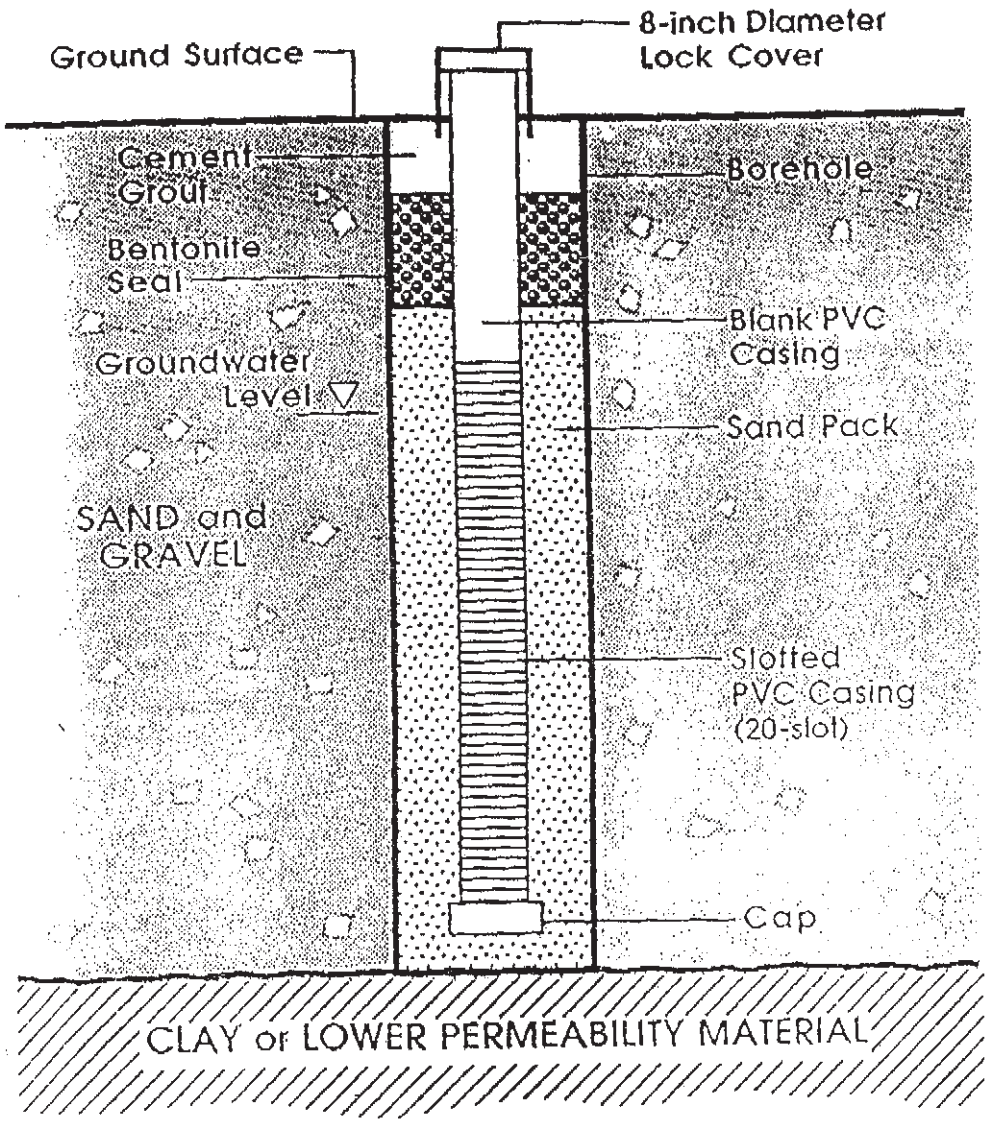
If you have any questions or need further information, please do hesitate to call either me or Charles Robinson at this office.

Sincerely,

J. Bretton Braden

J. Bretton Braden
Principal Chemical Engineer

cc: Joe Baird, Riverside Community Hospital
Dennis Zafuto, Toxguard Systems



SKETCH NOT TO SCALE

Figure 1 : TYPICAL MONITORING WELL DETAIL

Project No. 87P-171

LEVINE·FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

121087JBB/scj

Riverside County
Local Oversight Program
Electronic Case File

Site Name: Riverside Community Hospital

Site Number: 87557

Electronic File #: 7

File organized chronologically starting with #1

PROPOSAL FOR PHASE I HYDROGEOLOGIC INVESTIGATION OF SOIL AND GROUND WATER CONDITIONS IN THE VICINITY OF AN UNDERGROUND DIESEL STORAGE TANK AT RIVERSIDE COMMUNITY HOSPITAL, RIVERSIDE, CALIFORNIA

October 29, 1987
L·F 87P-171

LEVINE·FRICKE

Joe Asbury

LEVINE·FRICKE

October 29, 1987
L·F 87P-171

Mr. Joe Baird
Director
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, California 92501

Re: Enclosed Proposal for Phase I Hydrogeologic Investigation of Soil and Ground-Water Conditions in the Vicinity of an Underground Diesel Storage Tank located at Riverside Community Hospital, Riverside, California

Dear Mr. Baird:

At the request of Toxguard Systems, Inc., enclosed is our proposed Work Order for a Phase I hydrogeologic investigation of possible soil and ground-water contamination associated with an abandoned underground diesel storage tank located beneath the rear entrance to the Riverside Community Hospital, 4445 Magnolia Avenue, Riverside, California.

This proposal is submitted to you in the form of a Work Order Agreement to expedite your authorization for this work. To formally authorize this work, please sign both copies of this Work Order No. 1 as well as the Consulting Services Agreement and return one copy of each to us.

Also enclosed is a brochure describing Levine·Fricke's capabilities and services. If you have any questions or comments regarding this Work Order, please call either me or Charles Robinson at this office.

Sincerely,

J. Bretton Braden
Principal Chemical Engineer

cc: [redacted]
Toxguard Systems, Inc.

Ted Musialowski
Store, Matakovich & Wolfberg

4019 WESTERLY PLACE, SUITE 103
NEWPORT BEACH, CA 92660
(714) 955-1390

Other offices in OAKLAND

LEVINE·FRICKE

L·F 87P-171
October 29, 1987

WORK ORDER NO. 1
PROPOSED PHASE I HYDROGEOLOGIC INVESTIGATION OF
SOIL AND GROUND-WATER CONDITIONS IN THE VICINITY OF AN
UNDERGROUND DIESEL STORAGE TANK AT THE
RIVERSIDE COMMUNITY HOSPITAL
RIVERSIDE, CALIFORNIA

The following describes the Scope of Work, Schedule and Estimated Budget for work proposed to assess the extent of possible soil contamination in the vicinity of an underground diesel storage tank at the subject facility, and to investigate whether or not the fuel reportedly found in the soil beneath the tank is present in the shallow ground water beneath the site. Results of this investigation will be used to assess the need for further investigations or possible remedial actions.

INTRODUCTION

It is our understanding that Riverside Community Hospital, 4445 Magnolia Avenue, Riverside, California, recently contracted with Toxguard Systems, Inc. to remove an underground diesel storage tank located under a rear loading dock entrance to the hospital. After removal procedures were underway, it was decided that the tank could not be safely removed without jeopardizing the structural integrity of the hospital building. Test results from soil samples collected by Toxguard immediately under the tank reportedly indicated significant amounts of diesel fuel. The extent of subsurface contamination under and around the tank has not been explored at this time.

Levine·Fricke recommends a phased approach to assess the vertical and lateral extent of hydrocarbons in soil and ground water in the vicinity of the tank. If the tank cannot be safely removed, it should be properly abandoned in place in conjunction with subsequent remedial activities at the site.

SCOPE OF WORK

This Scope of Work is proposed to assess the level and extent of possible soil contamination in the vicinity of the underground diesel storage tank and to investigate whether diesel fuel, found in the soil during previous sampling, is present in shallow ground water beneath the site.

This Phase I proposal includes the completion of three (3) soil borings to obtain soil samples for chemical analysis from the interval between the base of the tank and ground water (estimated by Toxguard to be present at a depth of approximately 60 to 70 feet) to assess the lateral and vertical extent of affected soils. A ground-water sample will also be obtained from one of the borings to evaluate whether the diesel is present in the [illegible] water.

A technical report will be prepared, describing the sampling and analysis results. Based on the results of this Phase I investigation, the need for additional monitoring wells or borings will be evaluated and, if needed, a Phase II proposal will be prepared that may include the installation, sampling and testing of additional borings or monitoring wells. Following the Phase II investigation, if it is needed, a remedial system (e.g. air and/or ground-water extraction and treatment, or other remedial techniques) can be designed and implemented.

This Scope of Work is organized into the following tasks:

Task 1: Soil and Ground-Water Sampling
Task 2: Laboratory Analyses
Task 3: Data Evaluation and Report Preparation
Task 4: Project Management and Meetings

Task 1: Soil and Ground-Water Sampling

Three soil borings, including one vertical and two angle borings, will be drilled in the tank vicinity (just outside the parking-lot end of the tank) to sample soils in the unsaturated zone between the base of the diesel tank and the water table (see Figure 1).

Soil borings will be drilled using the hollow-stem auger drilling method. The first boring will be drilled vertically to the depth at which ground water is encountered, estimated to be approximately 60 to 70 feet below the ground surface. The second boring will be drilled at approximately a 30 degree angle from vertical beneath the tank, to a total depth of 50 to 60 feet. The third boring will be drilled at approximately a 45 degree angle from vertical beneath the tank, to a total depth of 30 to 40 feet. The two slant-drilled borings will be oriented approximately perpendicular to each other to provide information regarding the approximate lateral extent of hydrocarbons in soils beneath the tank. The actual depths of the soil borings will be selected in the field based upon depth to ground water and the types, depths and thicknesses of sediments encountered.

Soil samples will be collected for laboratory analysis of petroleum hydrocarbons from each soil boring at approximately five-foot intervals below the base of the diesel tank. A split-tube sampler or Modified California Sampler containing brass tubes will be used to collect the individual samples. These samples will be immediately sealed and placed in chilled coolers for transport to the laboratory. A portable hydrocarbon vapor analyzer (OVA) will be utilized during the sampling to assist in selecting samples for chemical analysis. Approximately four soil samples from each boring have been budgeted for chemical analysis. Other soil samples delivered to the laboratory will be retained for possible later analysis, if deemed necessary.

If possible, a ground-water sample will be obtained from the vertical soil boring using a Teflon bailer to collect a water sample from within the hollow-stem auger. The sample will be transferred into 40-ml VOA vials with Teflon septums and stored in a cooled ice chest for delivery to the laboratory. A field blank sample will also be collected for quality control purposes. This water sample will be analyzed for total petroleum hydrocarbons.

Drilling and sampling equipment and well materials will be steam-cleaned before use. Power, water and an area for cleaning equipment are to be provided by the Riverside Community Hospital. Levine·Fricke will assist in locating these facilities, as requested.

Levine·Fricke will contract for storage bins for waste soils and wastewater generated during this investigation. Disposal of the wastewater and soils will be the responsibility of Riverside Community Hospital, the designated waste generator. Levine·Fricke will help coordinate these activities with a waste hauler subcontractor. Levine·Fricke will assist in identifying disposal options after receiving analytical results for soil samples from the borings. The cost of waste disposal will depend on the amounts, types and concentrations of chemicals contained in the waste.

Task 2: Chemical Analyses

Soil and water samples will be analyzed for diesel fuel and petroleum hydrocarbons by a modified EPA Method 8015 using gas chromatography with a flame ionization detector (GC/FID). It is estimated that a total of approximately 12 soil samples and two water samples (including one field blank) will be analyzed.

Task 3: Data Evaluation and Report Preparation

A report will be prepared that summarizes the data and presents the resulting interpretations, assessments and recommendations for additional investigations or alternative remedial actions, if deemed necessary. The report will include detailed descriptions of the methodologies used to collect and analyze data and the technical rationale for the conclusions reached.

The report will describe the type(s) of sediments encountered, the occurrence, concentrations and distribution of organic compounds in soils and ground water, and interpretations concerning hydrogeologic conditions at the site. The report will also contain lithologic logs prepared during drilling activities, details of soil borings and well construction design, geological cross sections, chemical analysis data, and other documentation.

Task 3: Project Management and Meetings

Mr. Bret Braden, Principal Chemical Engineer, will be the Project Manager. As such, he will be the primary contact for Riverside Community Hospital and will be responsible for all technical and administrative aspects of the project. He will also be responsible for coordinating and managing the field activities and hydrogeologic evaluations. Mr. Thomas M. Johnson, R.G. and Principal Hydrogeologist, will peer review the work and assist in project management.

Meetings will be held, as requested, to present this Work Plan to local and State authorities to secure their approval on technical approach.

SCHEDULE

Levine·Fricke can begin this work within two weeks after receiving authorization to proceed from Riverside Community Hospital. We estimate that a draft report can be prepared within approximately seven to eight weeks of initiating project work. Riverside Community Hospital will be kept apprised of results as they become available. The final report will be submitted to Riverside Community Hospital shortly after receipt of review comments on the draft report. This proposed work schedule may require modification due to inclement weather or delay by outside contractors (laboratory processing, drilling, etc.).

FIGURES

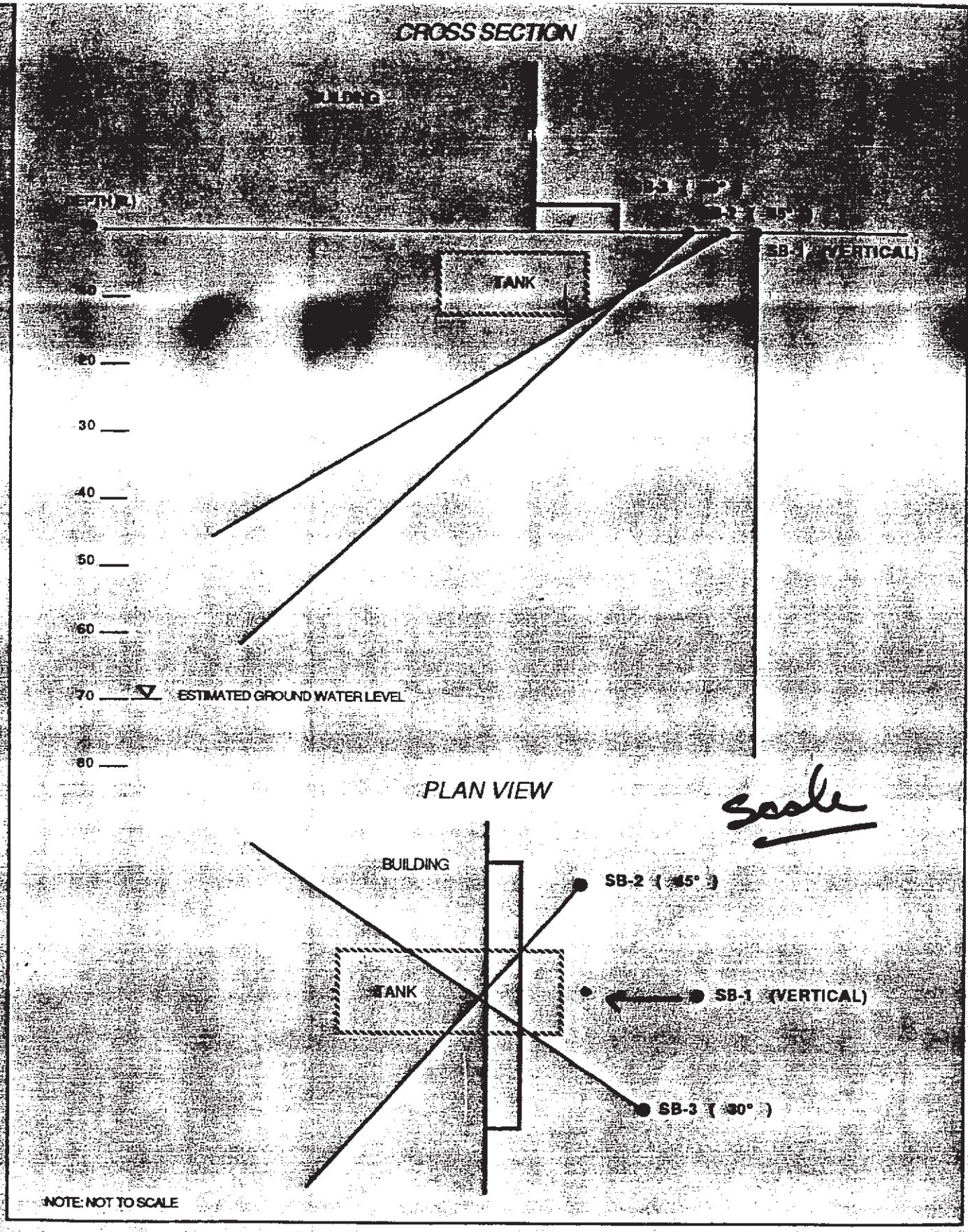


Figure 1 : SCHEMATIC DRILLING PLANS

COUNTY OF RIVERSIDE - DEPARTMENT OF HEALTH

3575 · 11th STREET MALL (POST OFFICE BOX 1370) · RIVERSIDE, CA 92502

Edward J. Gallagher M.D. M.P.H.
Director of Health

HAZARDOUS MATERIALS BRANCH
SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986
(Proposition 65)

NOTIFICATION OF DISCHARGE FORM

I.D.No. 87-557

I. Incident Title Leaking Underground Diesel Fuel Tank

Date Discharge Reported
To Hazardous Materials Branch 9-14-87

Incident Location Riverside Community Hospital 4445 Magnolia Ave Rvsd Telephone (714) 788-3143

HEALTH OFFICER NOTIFICATION

II. Date Discharge Report Received SEP 1 5 1987 Time 1645

by L. K. Lora
Edward J. Gallagher, M.D., M.P.H.
Director of Health

NOTIFICATION OF BOARD OF SUPERVISORS

III. Date Discharge Report Received 9-18-87 Time 4:25

Margaret Rozano
Signature

Deputy Clerk
Title

NEWS MEDIA NOTIFICATION

IV.

News Media Notified	Date	Time	Contact Person
1. Press Enterprise	9-18-87	5:30 Pm	Juan Aranaba
2.			

COUNTY OF RIVERSIDE - DEPARTMENT OF HEALTH

3575 · 11th STREET MALL (POST OFFICE BOX 1370) · RIVERSIDE, CA. 92502

Edward J. Gallagher, M.D., M.P.H.
Director of Health

HAZARDOUS MATERIALS BRANCH
SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986
DISCHARGE REPORT FORM

I.D.No. 87-557

Date Reported Sept 14, 87 Time 3:00 pm Date of Discharge unknown

Incident Location/Address 4445 Magnolia Ave Telephone( )

City Riverside Zip 92501

Responsible Party/Address Riverside Community Hospital Telephone(714) 788-3143

Description of Incident Precision tank tests results indicate tank is not tight; Field inspection during tank removal process revealed hole inside of tank

Substance(s) Discharged/Threatened Discharge Diesel fuel

Quantity unknown

Characteristics of Substance(s) Toxic, Combustible

Extent of Contamination

Soil unknown — tank is still being excavated

Water None

Air — None

Other — None

Health & Safety Threat potential threat to groundwater

Time of Threat ongoing

Health Recommendations Remove tank from ground

Description of Initial Mitigation Measures (evacuation, berming, absorption, containerizing)

Contents of tank removed. Tank in process of being removed

Cleanup Status Pending

Reported By Cindy Pinkerton Date Sept 14, 87

Title Haz Mat Specialist

Distribution: Original - Incident File
1st Copy - Health Officer
2nd Copy - Board of Supv.

DOH-HEH-006 (New 4/87)

Reply to:

COUNTY OF RIVERSIDE - DEPARTMENT OF HEALTH
3575 - 11th STREET MALL (POST OFFICE BOX 1370) - RIVERSIDE, CA. 92502
Edward J. Gallagher, M.D., M.P.H.
Director of Health

August 10, 1987

Mr. Joe Bain, Maintenance
Riverside Communtiy Hospital
4445 Magnolia Ave.
Riverside, CA 92501

RE: Leaking Underground Storage Tank (6,000 gal.) at 4445 Magnolia

Dear Mr. Bain;

As a result of your statements that visible leaks can be seen at your tank, I have enclosed a Release (Leak)/Contamination Site Report. Complete the U.S.T. Unauthorized Leak Report and return all five (5) copies to this agency plus a full written report of your tank release within five (5) working days upon receipt of this letter (see enclosed Reportable Release Requirements).

Also, I have enclosed a tank closure application if it is your intention to close this tank by removal.

Be advised, that if your fueling tank system continues to operate, the owner/operator of this facility is legally responsible for any soil contamination cleanup costs that may result from this leaking tank.

Feel free to call this office at (714) 369-1141 if you have any questions regarding the above correspondence or enclosed forms.

Sincerely,

Sandy Bunchek

Sandy Bunchek
Hazardous Materials Specialist
SB:lg

Reply to:

RIVERSIDE COMMUNITY HOSPITAL
Growing With Our Community

August 14, 1987

Riverside County Department of Health
3575 11th Street Mall
P.O. Box 1370
Riverside, CA 92502

Sirs;

A fuel leak was discovered in a 3000 gallon #2 diesel oil tank on June 30, 1987, while filling the tank for testing. The leak is near the top of the tank and it is estimated that approximately 100 gallons of fuel was lost.

The unit is situated partially under the building and the oil has been drained from the tank. A study is currently being conducted by a contractor to determine the most feasible method of removal of the tank.

Please feel free to contact me with any questions.

Sincerely,

David C. Adams

David C. Adams
Chief Engineer
Plant Operations

pw

Enclosures

RECEIVED
SEP 11 1987
County of Riverside
Department of Health
Environmental Health
Services Division

Affiliated with Community Health Corporation

4445 Magnolia Avenue, Riverside, CA 92501, Telephone 714-788-3000

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK)/CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO — HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☐ NO

STATE TANK ID #: UNKNOWN

REPORT DATE: 0M 8M 1D 4D 8Y 7Y

LOCAL CASE #:

REGIONAL BOARD CASE #:

US EPA ID #:

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: DAVID C. ADAMS

PHONE: (714) 788-3143

SIGNATURE:

REPRESENTING ☐ LOCAL AGENCY ☐ OTHER ☒ OWNER/OPERATOR ☐ REGIONAL BOARD

COMPANY OR AGENCY NAME: RIVERSIDE COMMUNTIY HOSPITAL

ADDRESS (STREET): 4445 MAGNOLIA AVENUE — CITY: RIVERSIDE — STATE: CALIFORNIA — ZIP: 92501

RESPONSIBLE PARTY

NAME: DAVID C. ADAMS / Jose Sandoval (attorney) (213) 955-7300 ☐ UNKNOWN

CONTACT PERSON: - SAME -

PHONE: (714) 788-3143

ADDRESS (STREET): - SAME - — CITY — STATE — ZIP

SITE LOCATION

FACILITY NAME (IF APPLICABLE): RIVERSIDE COMMUNITY HOSPITAL

OPERATOR: DAVID C. ADAMS

PHONE: (714) 788-3143

ADDRESS (STREET): - SAME - — CITY — COUNTY — ZIP

CROSS STREET: 14th

TYPE OF AREA: ☒ COMMERCIAL ☐ INDUSTRIAL ☐ RESIDENTIAL ☐ RURAL ☐ OTHER

TYPE OF BUSINESS: ☐ RETAIL FUEL STATION ☐ UNKNOWN ☒ OTHER HEALTH CARE

IMPLEMENTING AGENCIES

LOCAL AGENCY / AGENCY NAME	CONTACT PERSON	PHONE
		( )
REGIONAL BOARD		( )
TSCD		( )

SUBSTANCES INVOLVED

CAS # (ATTACH EXTRA SHEET IF NEEDED)	NAME	QUANTITY LOST (GALLONS)
(1)	#2 DIESEL	Approx. 100 Gallons ☐ UNKNOWN
(2)		☐ UNKNOWN

DISCOVERY/ABATEMENT

DATE DISCOVERED: 0M 6M 3D 0D 8Y 7Y

HOW DISCOVERED: ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ ROUTINE MONITORING ☐ TANK REMOVAL ☐ NUISANCE CONDITIONS ☒ OTHER: TESTING

DATE DISCHARGE BEGAN: M M D D Y Y ☒ UNKNOWN

HAS DISCHARGE BEEN STOPPED? ☒ YES ☐ NO IF YES, DATE 0M 6M 3D 0D 8Y 7Y

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY): ☒ REMOVE CONTENTS ☐ REPLACE TANK ☐ CLOSE TANK ☐ REPAIR TANK ☐ REPAIR PIPING ☐ CHANGE PROCEDURES ☐ OTHER

SOURCE/CAUSE

SOURCE(S) OF DISCHARGE: ☒ TANK LEAK ☐ UNKNOWN ☐ PIPING LEAK ☐ OTHER (SPECIFY)

TANKS ONLY/CAPACITY: GAL

AGE: 20 YRS. ☐ UNKNOWN

MATERIAL: ☒ STEEL ☐ FIBERGLASS ☐ OTHER

CAUSE(S): ☐ OVERFILL ☒ CORROSION ☐ RUPTURE/FAILURE ☐ SPILL ☐ UNKNOWN ☐ OTHER

RESOURCES AFFECTED/AT RISK

RESOURCES AFFECTED	YES	NO	THREATENED	UNKNOWN
AIR (VAPOR)	☐	☒	☐	☐
SOIL (VADOSE ZONE)	☐	☐	☐	☒
GROUNDWATER	☐	☐	☐	☒
SURFACE WATER OR STORM DRAIN	☐	☐	☐	☒
BUILDING OR UTILITY VAULT	☐	☐	☐	☒
OTHER (SPECIFY)	☐	☐	☐	☐

WATER SUPPLIES AFFECTED	YES	NO	THREATENED	UNKNOWN	# OF WELLS
PUBLIC DRINKING WATER	☐	☒	☐	☐	
PRIVATE DRINKING WATER	☐	☒	☐	☐	
INDUSTRIAL	☐	☒	☐	☐	
AGRICULTURAL	☐	☒	☐	☐	
OTHER (SPECIFY)	☐	☐	☐	☐	

GROUNDWATER BASIN NAME: ☒ UNKNOWN

COMMENTS

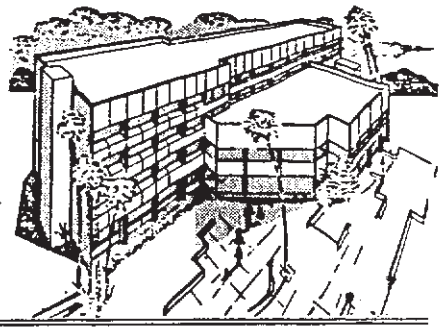
COMMENTS:

COMPLETE AND ATTACH A CLEANUP TRACKING REPORT IF ANY CLEANUP WORK OR PLANNING HAS STARTED

HSC 05 (10/85)

COUNTY OF RIVERSIDE

DEPARTMENT of HEALTH



E. J. GALLAGHER, M.D., M.P.H.
DIRECTOR OF HEALTH

CINDRA ROWELL, B.S.N., M.B.A.
DEPUTY DIRECTOR OF HEALTH
PERSONAL HEALTH SERVICES

J. M. FANNING, R.S., M.P.A.
DEPUTY DIRECTOR OF HEALTH
ENVIRONMENTAL HEALTH SERVICES

H.C. HOLK, D.V.M., M.P.H.
DEPUTY DIRECTOR OF HEALTH
SPECIAL SERVICES

E. R. COYNE, M.S.
DEPUTY DIRECTOR OF HEALTH
ADMINISTRATION & SUPPORT SERVICES

HEALTH CENTERS

BANNING
3055 RAMSEY STREET
BANNING, CA 92220

BLYTHE
263 NORTH BROADWAY
BLYTHE, CA 92225

CASA BLANCA
7240 MARGUERITA
RIVERSIDE, CA 92504

CORONA
505 SOUTH BUENA VISTA
CORONA, CA 91720

HEMET
880 NORTH STATE ST.
HEMET, CA 92343

INDIO
46-209 OASIS STREET
INDIO, CA 92201

LAKE ELSINORE
30195 FRASER DR.
LAKE ELSINORE, CA. 92330

PALM SPRINGS
3255 TAHQUITZ-McCALLUM
PALM SPRINGS, CA 92262

PERRIS
237 NORTH "D" STREET
PERRIS, CA 92370

RIVERSIDE
1520 LINDEN STREET
RIVERSIDE, CA. 92507

RUBIDOUX
5888 MISSION BLVD.
RIVERSIDE, CA 92509

Reply to:

4065 COUNTY CIRCLE DRIVE, RIVERSIDE, CA. 92503

April 11, 1989

CERTIFIED MAIL

Mr. David Adams
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501

Dear Mr. Adams:

The purpose of this letter is to inform you that County of Riverside, Department of Health, Environmental Health Services Division, Hazardous Materials Management Branch has entered into an agreement with the State of California Water Resources Control Board to oversee the cleanup and mitigation of contaminated sites resulting from the unauthorized release of hazardous substances from underground storage tanks. The cleanup of these sites is necessary to protect the groundwaters of the state from contamination and to protect the public from exposure from hazardous chemicals.

The oversight program developed by the State and administered by the County is funded by State and Federal monies and is subject to reimbursement by the responsible parties for each specific site. The County will account for time and materials expended at each cleanup site. On a routine basis, the State will be provided with the amounts detailing the time and expenses. The State will then invoice the responsible party for all direct and indirect costs associated with the cleanup of the site.

Enclosed you will find the Notice of Reimbursement. This is the formal notification concerning the reimbursement requirements for the responsible party. If any of the information is incorrect or if you should have any questions, contact this office as soon as possible at (714) 358-5055.

Sincerely,

Wendy Sheridan
Hazardous Materials Specialist

WS:rja

cc: SWRCB
RWQCB

State Water Resources Control Board
Division of Water Quality
UST Cleanup Program

Notice of Reimbursement
When Federal Funds are Used

Site Code 87-557 Date First Reported 8/14/87

Site Name Riverside Community Hospital Substance 12034

Address 4445 Magnolia Petroleum (X)Yes ( )No

City/State/Zip Riverside, CA 92501

The following information has been provided to:

Responsible Party Mr. David Adams

Company Name Riverside Community Hospital

Address 4445 Magnolia

City/State/Zip Riverside, CA 92501

Whereas the federal Petroleum Leaking Underground Storage Tank Trust Fund provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks; and Whereas the direct and indirect costs of overseeing removal or remedial action at the above site are funded, in whole or in part, from the federal Trust Fund; and Whereas the above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site; YOU ARE HEREBY NOTIFIED that pursuant to Subdivision (h) of Section 699(b) of the United States Code, the above Responsible Party or Parties shall reimburse the State Water Resources Control Board for all direct and indirect costs incurred by any and all state and local agencies while overseeing the cleanup of the above underground storage tank site, and the above Responsible Party or Parties shall make full payment of such costs within 30 days of receipt of a detailed invoice from the State Water Resources Control Board.

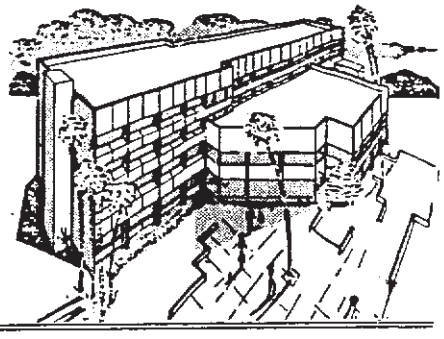
Contract Project Director:

Signature (714) 358-5055 Date 4/11/89
Telephone Number

STANDARD FORM USTO2(3/88)

COUNTY OF RIVERSIDE

DEPARTMENT of HEALTH



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1520 LINDEN STREET
RIVERSIDE, CA. 92507

RUBIDOUX
5888 MISSION BLVD.
RIVERSIDE, CA 92509

Reply to:

4065 COUNTY CIRCLE DRIVE, RIVERSIDE, CA. 92503

April 10, 1989

CERTIFIED MAIL

Mr. Jose Sandoval
Leboeuf, Lamb, Leiby, & MacRae
725 S. Figueroa Street, Suite 2205
Los Angeles, CA 90017

RE: Riverside Community Hospital, 4445 Magnolia, Riverside

Dear Mr. Sandoval:

The purpose of this letter is to inform you that County of Riverside, Department of Health, Environmental Health Services Division, Hazardous Materials Management Branch has entered into an agreement with the State of California Water Resources Control Board to oversee the cleanup and mitigation of contaminated sites resulting from the unauthorized release of hazardous substances from underground storage tanks. The cleanup of these sites is necessary to protect the groundwaters of the state from contamination and to protect the public from exposure from hazardous chemicals.

The oversight program developed by the State and administered by the County is funded by State and Federal monies and is subject to reimbursement by the responsible parties for each specific site. The County will account for time and materials expended at each cleanup site. On a routine basis, the State will be provided with the amounts detailing the time and expenses. The State will then invoice the responsible party for all direct and indirect costs associated with the cleanup of the site.

Enclosed you will find the Notice of Reimbursement. This is the formal notification concerning the reimbursement requirements for the responsible party. If any of the information is incorrect or if you should have any questions, contact this office as soon as possible at (714) 358-5055.

Sincerely,

Wendy Sheridan
Hazardous Materials Specialist

WS:rja

cc: SWRCB
RWQCB

State Water Resources Control Board
Division of Water Quality
UST Cleanup Program

Notice of Reimbursement
When Federal Funds are Used

Site Code 87-557 Date First Reported 8 / 14 / 87

Site Name Riverside Community Hospital Substance 12034

Address 4445 Magnolia Avenue Petroleum (X)Yes ( )No

City/State/Zip Riverside, CA 92501

The following information has been provided to:

Responsible Party Mr. Jose Sandoval

Company Name Leboeuf, Lamb, Leiby, & MacRae

Address 725 S. Figueroa Street, Suite 2205

City/State/Zip Los Angeles, CA 90017

Whereas the federal Petroleum Leaking Underground Storage Tank Trust Fund provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks; and Whereas the direct and indirect costs of overseeing removal or remedial action at the above site are funded, in whole or in part, from the federal Trust Fund; and Whereas the above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site; YOU ARE HEREBY NOTIFIED that pursuant to Subdivision (h) of Section 699(b) of the United States Code, the above Responsible Party or Parties shall reimburse the State Water Resources Control Board for all direct and indirect costs incurred by any and all state and local agencies while overseeing the cleanup of the above underground storage tank site, and the above Responsible Party or Parties shall make full payment of such costs within 30 days of receipt of a detailed invoice from the State Water Resources Control Board.

Contract Project Director:

Signature (714) 358-5055 Date 4/11/89
Telephone Number

STANDARD FORM UST02(3/88)

COUNTY OF RIVERSIDE, DEPARTMENT OF HEALTH
HAZARDOUS MATERIALS BRANCH
SITE MITIGATION PROGRAM
PRELIMINARY ASSESSMENT SUMMARY

I. SITE INFORMATION

A) Site Number - 87-557

Name - Riverside Community Hospital
Address - 4445 Magnolia
City, State, Zip - Riverside, CA 92501
Description

B) Substances - Gasoline

C) Threat - Groundwater

II. STATUS

A) Site Status - Remedial Investigation

B) Responsible Party - David Adams

Able to fund current activities? Yes X No ____
Able to fund future activities? Yes X No ____
Oversight funding source: State _____ Federal X

III. TASK

A) Site Characterization	Est. Completion (Month/Year)
1. Preliminary Assessment	1. 3-89
2. Remedial Investigation	2. 5-89
3. Feasibility Study	3. ----
B) Remedial Action Plan	6-89
C) Remedial Action	
1. Design	1. 6-89
2. Implementation	2. 7-89
3. Certification	3. 8-89

217300018

No Information Available for 217300018

Go Back To Previous Page

Code Enforcement Home Page

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217300009

No Information Available for 217300009

Go Back To Previous Page

Code Enforcement Home Page

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217070027

No Information Available for 217070027

Go Back To Previous Page

Code Enforcement Home Page

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PERMITS ATTACHED TO APN

Online Services

No Information Available for 217300018

Search with another APN

9 Digit APN #:
(e.g. 111222333)

Submit | Clear Form

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PERMITS ATTACHED TO APN

Online Services

No Information Available for 217300009

Search with another APN

9 Digit APN #:
(e.g. 111222333)

Submit | Clear Form

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PERMITS ATTACHED TO APN

Online Services

No Information Available for 217070027

Search with another APN

9 Digit APN #:
(e.g. 111222333)

Submit | Clear Form

© Riverside County Transportation & Land Management Agency

Susan Smith

From: WB-RB8-FileReview8 <FileReview8@waterboards.ca.gov>
Sent: Wednesday, June 05, 2013 11:03 AM
To: Susan Smith
Subject: RE: Records Request - Riverside Community Hospital

Hi Susan,

I show no records for the addresses listed below. If you have any question you can call me at 951 782 4499.

Thanks,
Mary

From: Susan Smith [mailto:ssmith@dudek.com]
Sent: Wednesday, June 05, 2013 10:30 AM
To: WB-RB8-FileReview8
Subject: RE: Records Request - Riverside Community Hospital

Hi Mary,
I have also been informed that a few additional addresses have been added to the project. Would you mind letting me know if you have records for the additional addresses listed below?

- 4410 Brockton Avenue
- 4414 Brockton Avenue
- 4420 Brockton Avenue
- 4426 Brockton Avenue
- 4646 Brockton Avenue

Thank you very much!
Susie

Susie Smith
Geologist/Project Manager

As of June 1, please note new address:
3685 Main Street, Suite 250
Riverside, CA 92501
T: 951.300.2100 x3715
C: 760.840.7526
DUDEK | *Natural Resource Management | Infrastructure Development | Regulatory Compliance*

From: Edwards, Mary@Waterboards [mailto:Mary.Edwards@waterboards.ca.gov] **On Behalf Of** WB-RB8-FileReview8
Sent: Wednesday, May 29, 2013 11:45 AM
To: Susan Smith
Subject: RE: Records Request - Riverside Community Hospital

Hi Susan,
I show no records for the addresses listed below. If you have any questions you can call me at 951 782 4499.

Thanks,
Mary

From: Susan Smith [mailto:ssmith@dudek.com]
Sent: Tuesday, May 28, 2013 10:56 AM
To: WB-RB8-FileReview8
Subject: Records Request - Riverside Community Hospital

Hi,
I am conducting a Phase I Environmental Site Assessment for the Riverside Community Hospital campus and would like to know if your office has records for the site. Specifically, the addresses associated with the campus properties are:

4445 Magnolia Avenue, Riverside
4000 14th Street, Riverside
4500 Brockton Avenue, Riverside

Please let me know if you need additional information.
Thank you,
Susie

Susie Smith
Geologist/Project Manager

As of June 1, please note new address:
3685 Main Street, Suite 250
Riverside, CA 92501
T: 951.300.2100 x3715
C: 760.840.7526
DUDEK | *Natural Resource Management | Infrastructure Development | Regulatory Compliance*

Fire
Department

June 20, 2013

Dudek
3685 Main Street #350
Riverside, CA 92501

RE: Record Search for 4445 Magnolia St, 4000 14th St & 4500 Brockton Ave in Riverside, CA.

Dear: Susie Smith

A records search has been conducted on the above referenced addresses. The records show the following:

4445 Magnolia Street:

- There is a Hazardous Materials Business Emergency Plan (HMBEP) on file. Copies included.
- No violations were noted.

4000 14th Street:

- There is no Hazardous Materials Business Emergency Plan (HMBEP) on file.
- No violations were noted.

4500 Brockton Avenue:

- There is no Hazardous Materials Business Emergency Plan (HMBEP) on file.
- No violations were noted.

The City's Finance Department will be forwarding a bill to you in the amount of **$35.80**. This includes .5 hour(s) at $65/hour, and $3.30 for copying fees. The County of Riverside Department of Environmental Health has administered the Underground Storage Tank program in the City of Riverside since 1989. They also maintain soil contamination as well as hazardous waste records and should be contacted in addition to our department. Their telephone number is **(951) 358-5055**.

Sincerely,

Cathy Mitchell

CITY OF RIVERSIDE
FIRE DEPARTMENT

Business Activities Form

I. Facility Identification

Facility ID#: FA0014577/PR0027245	EPA ID#: CAL000006168
Business Name: Riverside Community Hospital	

II. Activities Declaration

NOTE: If you check YES to any part of this list, please submit the Business Onwer/Operator Identification Page (OES Form 2730)

Does your facility..	If Yes, please complete these pages of the UPCF...	
A. Hazardous Materials		
Handle hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in ASTs and USTs); or the applicable Federal threshold quantity for an extremely hazardous substance specified in 40 CFR Part 355, Appendix A or B; or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70; a total weight of ten pounds for organic peroxides, any known or suspected carcinogen, radioactive or highly toxic material, or class 1.1, 1.2 or 1.3 explosive.	Yes	Hazardous Materials Inventory -Chemical Description(OES 2731)
B. Underground Storage Tanks (USTs)		
Own or operate a UST ?	Yes	UST Facility(Formerly SWRCB Form A) UST TANK (one page per tank) (Formerly Form B)
Intend to upgrade existing or install new USTs?	No	UST Facility UST Tank (one per tank) UST Installation - Certificate Of Compliance (one page per tank) (Formerly Form C)
Need to report closing a UST?	No	UST Tank (closure portion - one page per tank)
C. Above Ground Petrolem Storage Tanks (ASTs)		
Own or operate ASTs above these thresholds: (1) any tank greater than 1320 gallons, or (2) the total capacity for the facility is greater than 1,320 gallons.	No	No Form Required To CUPAs
D. Hazardous Waste		
Generate hazardous waste?	Yes	EPA ID NUMBER – provide at the top of this page
Recycle more than 100 kg/month of excluded or exempted recyclable materials.	Yes	Recyclable Materials Report (one per recycler)
Treat hazardous waste on site?	No	Onsite Hazardous Waste Treatment - Facility (Formerly DTSC Forms 1772)/nOnsite Hazardous Waste Treatment - Unit (one page per unit) (Formerly DTSC Forms 1772 A,B,C,D and L)
Treat subject to financial assurance (for Permit by Rule/Conditional Authorization)?	No	Certificate of Financial Assurance (Formerly DTSC Form 1232)
Consolidate hazardous waste at a remote site?	No	Remote Waste / Consolidation Site Annual Notification (Formerly DTSC Form 1196)
Report the closure/removal of a tank classified as hazardous waste and cleaned onsite?	No	Hazardous Waste Tank Closure Certification (Formerly DTSC Form 1249)
E. Local Requirements		

CITY OF RIVERSIDE
FIRE DEPARTMENT

Business Owner / Operator Form

I. Identification

Facility ID#: FA0014577/PR0027245		
Business Name: Riverside Community Hospital		Business Phone: 951-788-3000
Business Site Address: 4445 Magnolia AVE		
City: Riverside	CA	Zip Code: 92501
Dun & Bradstreet: 07-606-6299		SIC Code: 8062
Daytime Contact at Facility: HCA Doug Long		Daytime Phone: 951-788-3000

II. Business Owner

Owner Name: HCA Healthcare		Owner Phone: 951-788-3000
Owner Mailing Address: 4445 Magnolia Avenue		
City: Riverside	State: Ca	Zip Code: 92501

III. Environmental Contact

Contact Name: Jose Torres		Contact Phone: 951-788-3140
Contact Mailing Address: 4445 Magnolia Avenue		
City: Riverside	State: Cal	Zip Code: 92501

IV. Emergency Contacts

-Primary-	-Secondary-
Name: Jose Torres	Name: William Huey
Title: Director of Facilities	Title: Public Security
Business Phone: 951-788-3140	Business Phone: 951-788-3329
24-Hour Phone: 951-788-3000	24-Hour Phone: 951-788-3000
Pager / Cell:	Pager #:

V. Billing Contact

Billing Name: Riverside Community Hospital		Billing Phone: 951-788-3000
Billing Address: 4445 Magnolia Avenue		
City: Riverside	State: Ca	Zip Code: 92501

Certification: Based on my inquiry of those individuals responsible for obtaining the information, I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete.

Signature of Owner/Operator or Designated Representative	Date	Package Preparer: Jose Torres
Document Signer: Jose Torres	Title of Signer: Director of Facilities	

HAZARDOUS MATERIAL BUSINESS EMERGENCY PLAN
EMERGENCY PROCEDURES

Emergency response plans and procedures are an integral part of the HMBEP. By taking the time to develop plans and procedures for your business, you will avoid complications resulting from inaction or misguided action during an emergency. Once the plans and procedures are developed, your employees will have an informative guide to follow in the event of an emergency. You must address each of the following items, however, the amount of detail you provide will depend upon the size and nature of the business, the damage potential of the hazardous materials handled and the location of the business with respect to residential or other populated areas.

1. EMERGENCY RESPONSE PLANS AND PROCEDURES

A. If you have a release or threatened release of hazardous materials, your business is required by state law to provide immediate notification to the following agencies:

Immediately Call

Local emergency response personnel (Fire, paramedics, police or sheriff)	911
State Office of Emergency Services	(800) 852-7550 or (916) 262-1621

Immediately call the appropriate jurisdiction:

The County of Riverside Hazardous Materials Management Division:	(951) 358-5055
CDF/Banning Fire Service	(951) 922-3210
City of Corona Fire Department	(951) 736-2220
City of Riverside Fire Department	(951) 826-5321

Person(s) within the business required responding to a hazardous materials incident:

Name: Jose Torres	Telephone: 951 788-3140
Name: Tom Leon	Telephone: 951 788-3329

B. Identify the local emergency medical facility that will be used by your business in the event of an injury caused by the release of a hazardous material:

Medical Facility: Riverside Community Hospital
Medical Facility Address: 4445 Magnolia Ave.
Medical Facility City: Riverside, CA 92501
Hospital Phone: 951 788-3000

2. PREVENTION

Describe the kind of hazards associated with the materials present at your business. Provide information on the steps taken at your business, or the policies or procedures now in place, to help prevent an accidental release of a hazardous material. Issues for discussion may include safety, storage, and containment procedures. Be specific for each type of hazardous material at your business.

Information Located in the Hazardous Material Binder located in EVS Directors Office and Engineering Directors Office.

3. MITIGATION

Describe the procedures to be followed to reduce the severity of a release or threatened release of a hazardous material at your business. The procedures should detail the actions to be taken by employees to stop a release, contain a release, or to reduce the problems associated with a release. What is your immediate response to a spill, fire, explosion or airborne release at your business? Do not write procedures that exceed the capabilities of employees or equipment at your business or that violate any worker safety laws.

Information is located in the MSDS Binders or referrel number located in every departmetn and the Hazardous Materials and Waste Standards Binder located in the EVS office and the Engineering Office.

4. ABATEMENT

Describe what you would do to stop and remove each hazard. How do you handle the complete process of stopping a release, cleaning up, and disposing of released materials at your business? What aspects of the response are beyond your ability and need to be handled by others? Who would you call to handle the release?

Information Located in the Hazardous Materials and Waste Standards Binder located in Engineering and EVS office.

5. EVACUATION

Describe the procedures to be followed for immediate notification and evacuation of your business:

Policy Information is located on the RCH Global Drive: Under the Disaster Plan and then by specific departments, or the Disaster Manual located in Engineering office and EVS office.

6. EARTHQUAKES

Identify the areas and equipment in your business, which would require immediate inspection or isolation due to their vulnerability to earthquake related ground motion. Check for equipment such as gas cylinders, piping, drums, etc., that may need to be secured or spillage that may require mitigation or abatement.

Information Located in the Disaster Manual in Engineering Office and Evs Office.

7. HAZARDOUS WASTE CONTINGENCY

Specific procedures for prevention, mitigation and abatement of a release of hazardous waste generated at your business. This section only applies to hazardous waste generators.

Information located in the Hazardous Materials and Waste Standards Manual in Engineering Dept. and EVS Dept.

8. UNAUTORIZED RELEASE REPONSE PLAN

Specific procedures for mitigation, abatement and reporting of an unauthorized release from an underground storage tank (UST). The plan must address a release from a single wall or a double wall tank system as applicable. This plan should cover the entire UST system. This section only applies to UST owner/operators.

Information Located in the Disaster Manual in Engineering Office and Evs Office.

9. SITE SECURITY

As applicable on an individual facility basis, you should assess the security and vulnerability of your business from intentional acts both from within your business (sabotage) and from the outside (vandalism and terrorist acts). This assessment should consider testing your security system and procedures on a regular basis. Details of this assessment should not be included in this plan as it is a public document.

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineeringn Dept./Operations	☒ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: CT-502	Grid #:

II. Chemical Information

Chemical Name: CT-502	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name: Sulfuric Acid	☒ Extremely Hazardous Substance (EHS)
CAS #: 7664-93-9	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Corrosive (CORR)

Hazardous Material Type	☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):	
Physical State	☐ Solid ☒ Liquid ☐ Gas	Largest Container: 55.0		
Federal Hazard Categories	☐ Fire ☐ Reactive ☐ Pressure Release ☒ Acute Health ☐ Chronic Health ☐ None			
Average Daily Amount: 82.5	Maximum Daily Amount: 165.0	Annual Waste Amount:	State Waste Code:	
Units (If EHS, amount must be in pounds)	☐ Cubic Feet ☐ Pounds ☐ Tons ☒ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:	

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☒ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure: ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature: ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
8.0	Zinc Sulfate	☐	7733-02-0
10.0	Hydroxyethylidene diphosphonic	☐	2809-21-4
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Department/Plant Operations	☒ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: DS-50	Grid #:

II. Chemical Information

Chemical Name: DS-50	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: Diethylene glycol	☐ Extremely Hazardous Substance (EHS)	
CAS #: 112-34-5	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): None		
Hazardous Material Type ☒ Pure ☐ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 20.0	
Federal Hazard Categories ☒ Fire ☐ Reactive ☐ Pressure Release ☒ Acute Health ☐ Chronic Health ☐ None		
Average Daily Amount: 10.0	Maximum Daily Amount: 20.0	Annual Waste Amount:	State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☐ Pounds ☐ Tons ☒ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☒ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Department/Plant Operations	☒ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: BromMax	Grid #:

II. Chemical Information

Chemical Name: BromMax				☐ Trade Secret (If subject to EPCRA, refer to instructions)		
Common Name: Sodium Hydroxide				☒ Extremely Hazardous Substance (EHS)		
CAS #: 1310-73-2				if EHS is Yes, all amounts below must be in lbs.		
Fire Code Hazard Class (Check none if not applicable): Irritant (Irr)						
Hazardous Material Type	☐ Pure	☒ Mixture	☐ Waste	☐ Radioactive	Curies (If radioactive):	
Physical State	☐ Solid	☒ Liquid	☐ Gas	Largest Container: 100.0		
Federal Hazard Categories	☒ Fire	☐ Reactive	☐ Pressure Release	☐ Acute Health	☐ Chronic Health	☐ None
Average Daily Amount: 50.0	Maximum Daily Amount: 100.0		Annual Waste Amount:	State Waste Code:		
Units (If EHS, amount must be in pounds)	☐ Cubic Feet	☒ Pounds	☐ Tons	☐ Gallons	Days on Site:	
	☐ Ounces (Liquid)	☐ Barrels (42 gal)	☐ Liters	☐ Cubic Meters		
	☐ Ounces (Weight)	☐ Grams	☐ Curies			

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☒ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure	☒ Ambient	☐ Above Ambient	☐ Below Ambient
Storage Temperature	☒ Ambient	☐ Above Ambient	☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
	Akaline Bromide salts	☐	
		☐	
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		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Dept./Plant Operations	☒ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: CT-535	Grid #:

II. Chemical Information

Chemical Name: CT-535	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name: Aminotri	☒ Extremely Hazardous Substance (EHS)
CAS #: 6419-19-8	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): None

Hazardous Material Type	☐ Pure	☒ Mixture	☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State	☐ Solid	☒ Liquid	☐ Gas	Largest Container: 55.0	
Federal Hazard Categories	☐ Fire	☐ Reactive	☐ Pressure Release	☒ Acute Health	☐ Chronic Health ☐ None

Average Daily Amount: 82.5	Maximum Daily Amount: 165.0	Annual Waste Amount:	State Waste Code:

Units (If EHS, amount must be in pounds)	☐ Cubic Feet	☐ Pounds	☐ Tons	☒ Gallons	Days on Site:
	☐ Ounces (Liquid)	☐ Barrels (42 gal)	☐ Liters	☐ Cubic Meters	
	☐ Ounces (Weight)	☐ Grams	☐ Curies		

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☒ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure	☒ Ambient	☐ Above Ambient	☐ Below Ambient	
Storage Temperature	☒ Ambient	☐ Above Ambient	☐ Below Ambient	☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
5.0	Phosphonobutane-tricarboxylic acid	☐	37971-36-1
3.0	Benzotrazole	☐	95-14-7
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Department/Plant Operations	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: Chlorine Granules	Grid #:

II. Chemical Information

Chemical Name: Chlorine Granules				☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: Chlorine				☒ Extremely Hazardous Substance (EHS)	
CAS #:				if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): None					
Hazardous Material Type	☒ Pure	☐ Mixture	☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State	☒ Solid	☐ Liquid	☐ Gas	Largest Container: 100.0	
Federal Hazard Categories	☐ Fire	☐ Reactive	☐ Pressure Release	☒ Acute Health	☐ Chronic Health ☐ None
Average Daily Amount: 50.0	Maximum Daily Amount: 100.0		Annual Waste Amount:	State Waste Code:	
Units (If EHS, amount must be in pounds)	☐ Cubic Feet	☒ Pounds	☐ Tons	☐ Gallons	Days on Site:
	☐ Ounces (Liquid)	☐ Barrels (42 gal)	☐ Liters	☐ Cubic Meters	
	☐ Ounces (Weight)	☐ Grams	☐ Curies		

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☒ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure	☒ Ambient	☐ Above Ambient	☐ Below Ambient
Storage Temperature	☒ Ambient	☐ Above Ambient	☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
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		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Dept./Plant Ops.	☒ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: BT-311	Grid #:

II. Chemical Information

Chemical Name: BT-311	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name: Sodium Hydroxide	☒ Extremely Hazardous Substance (EHS)
CAS #: 1310-73-2	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Corrosive (CORR)

Hazardous Material Type	☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):	
Physical State	☐ Solid ☒ Liquid ☐ Gas	Largest Container: 15.0		
Federal Hazard Categories	☐ Fire ☐ Reactive ☐ Pressure Release ☒ Acute Health ☐ Chronic Health ☐ None			
Average Daily Amount: 10.0	Maximum Daily Amount: 15.0	Annual Waste Amount:	State Waste Code:	
Units (If EHS, amount must be in pounds)	☐ Cubic Feet ☐ Pounds ☐ Tons ☒ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:	

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☒ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
10.0	Hydroxyethlidene	☐	9794-83-0
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Dept./Plant Operations	☒ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: BT-408	Grid #:

II. Chemical Information

Chemical Name: BT-408	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name: Diethylaminoethanol	☒ Extremely Hazardous Substance (EHS)
CAS #: 100-37-8	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Combustible Liquid, Class II (1.1 II)

Hazardous Material Type	☐ Pure	☒ Mixture	☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State	☐ Solid	☒ Liquid	☐ Gas	Largest Container: 10.0	
Federal Hazard Categories	☒ Fire	☐ Reactive	☐ Pressure Release	☒ Acute Health	☐ Chronic Health ☐ None

Average Daily Amount: 5.0	Maximum Daily Amount: 10.0	Annual Waste Amount:	State Waste Code:

Units (If EHS, amount must be in pounds)	☐ Cubic Feet	☐ Pounds	☐ Tons	☒ Gallons	Days on Site:
	☐ Ounces (Liquid)	☐ Barrels (42 gal)	☐ Liters	☐ Cubic Meters	
	☐ Ounces (Weight)	☐ Grams	☐ Curies		

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☒ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
10.0	Cyclohexylamine	☐	108-91-8
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Department/ Plant Operations	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: BT-501L	Grid #:

II. Chemical Information

Chemical Name: BT-501L	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: Sodium Sulfite	☒ Extremely Hazardous Substance (EHS)	
CAS #: 7757-83-7	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable):		
Hazardous Material Type ☒ Pure ☐ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 100.0	
Federal Hazard Categories ☐ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None		
Average Daily Amount: 50.0	Maximum Daily Amount: 100.0	Annual Waste Amount: / State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☒ Pounds ☐ Tons ☐ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☒ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: OR	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: SP Buffered 10% Formalin	Grid #:

II. Chemical Information

Chemical Name: SP Buffered 10% Formalin	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name: SP Buffered 10% Formalin	☒ Extremely Hazardous Substance (EHS)
CAS #: 506 93-4, 9002-93-1, 67-63-0	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Flammable Liquid, Class I-A (3.3 I-A)

Hazardous Material Type	☐ Pure ☒ Mixture ☐ Waste		☐ Radioactive	Curies (If radioactive):
Physical State	☐ Solid ☒ Liquid ☐ Gas		Largest Container: 1.0	
Federal Hazard Categories	☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None			
Average Daily Amount: 2.0	Maximum Daily Amount: 4.0	Annual Waste Amount:		State Waste Code:
Units (If EHS, amount must be in pounds)	☐ Cubic Feet ☐ Pounds ☐ Tons ☒ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies			Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
4.0	Formaldehyde	☒	50-00-0
1.0	Methyl Alchohol	☐	67-56-1
0.4	Monobasic Sodium Phosphate	☐	10049-21-5
0.65	Dibasic Sodium Phospate	☐	7558-79-4
90.0	Water	☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: OR	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: SP Buffered 10% Formalin	Grid #:

II. Chemical Information

Chemical Name: SP Buffered 10% Formalin	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: SP Buffered 10% Formalin	☐ Extremely Hazardous Substance (EHS)	
CAS #:	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): Flammable Liquefied Gas (3.2I)		
Hazardous Material Type ☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 1.0	
Federal Hazard Categories ☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None		
Average Daily Amount: 24.0	Maximum Daily Amount: 48.0	Annual Waste Amount: / State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☐ Pounds ☐ Tons ☒ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
4.0	Formaldehyde	☒	50-00-0
1.0	Methyl Alcohol	☐	67-56-1
0.4	Monobasic Sodium Phosphate	☐	10049-21-5
0.65	Dibasic Sodium phosphate	☐	7558-79-4
90.0	Water	☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: OR	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: SP Buffered 10% Formalin	Grid #:

II. Chemical Information

Chemical Name: SP Buffered 10% Formalin	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: SP Buffered 10% Formalin	☐ Extremely Hazardous Substance (EHS)	
CAS #: 506 93-4, 9002-93-1, 67-63-0	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): Flammable Liquefied Gas (3.2l)		
Hazardous Material Type ☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 90.0	
Federal Hazard Categories ☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None		
Average Daily Amount: 11250.0	Maximum Daily Amount: 22500.0	Annual Waste Amount: / State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
4.0	Formaldehyde	☒	50-00-0
1.0	Methyl Alcohol	☐	67-56-1
0.4	Monobasic Sodium Phospate	☐	10049-21-5
0.65	Dibasic Sodium Phosphate	☐	7558-79-4
90.0	Water	☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: OR	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: SP Buffered 10% Formalin	Grid #:

II. Chemical Information

Chemical Name: SP Buffered 10% Formalin	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: SP Buffered 10% Formalin	☒ Extremely Hazardous Substance (EHS)	
CAS #: 506 93-4, 9002-93-1, 67-63-0	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): Flammable Liquid, Class I-A (3.3 I-A)		
Hazardous Material Type ☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 30.0	
Federal Hazard Categories ☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None		
Average Daily Amount: 3750.0	Maximum Daily Amount: 7500.0	Annual Waste Amount: / State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
4.0	Formaldehyde	☒	50-00-0
1.0	Methyl Alcohol	☐	67-56-1
0.4	Monobasic Sodium Phosphate	☐	10049-21-5
0.65	Dibasic Sodium Phosphate	☐	7558-79-4
90.0	Water	☐	

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CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: OR	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: SP Buffered 10% Formalin	Grid #:

II. Chemical Information

Chemical Name: SP Buffered 10% Formalin	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name: SP Buffered 10% Formalin	☒ Extremely Hazardous Substance (EHS)
CAS #: 506 93-4, 9002-93, 67-63-0	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Flammable Liquid, Class I-A (3.3 I-A)

Hazardous Material Type	☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):	
Physical State	☐ Solid ☒ Liquid ☐ Gas	Largest Container: 16.0		
Federal Hazard Categories	☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None			
Average Daily Amount: 56.0	Maximum Daily Amount: 112.0	Annual Waste Amount:	State Waste Code:	
Units (If EHS, amount must be in pounds)	☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:	

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
4.0	Formaldehyde	☒	50-00-0
1.0	Methyl Alcohol	☐	67-56-1
0.4	Monobasic Sodium Phosphate	☐	100049-21-5
0.65	Dibasic Sodium Phosphate	☐	7558-79-4
90.0	Water	☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Materials Mgmt.	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: Hydrogen Peroxide	Grid #:

II. Chemical Information

Chemical Name: Hydrogen Peroxide	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: Hydrogen Peroxide	☒ Extremely Hazardous Substance (EHS)	
CAS #: 7722-84-1	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): Flammable Liquid, Class I-A (3.3 I-A)		
Hazardous Material Type ☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 16.0	
Federal Hazard Categories ☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None		
Average Daily Amount: 40.0	Maximum Daily Amount: 80.0	Annual Waste Amount: / State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: ORSPD	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: Hydrogen Peroxide	Grid #:

II. Chemical Information

Chemical Name: Hydrogen Peroxide	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: Hydrogen Peroxide	☒ Extremely Hazardous Substance (EHS)	
CAS #: 7722-84-1	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): Flammable Liquid, Class I-A (3.3 I-A)		
Hazardous Material Type ☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 16.0	
Federal Hazard Categories ☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None		
Average Daily Amount: 40.0	Maximum Daily Amount: 80.0	Annual Waste Amount: / State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: ORSPD	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: Blitz II	Grid #:

II. Chemical Information

Chemical Name: Blitz II surgical instrument cleaner and lubricant	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name: Blitz II	☒ Extremely Hazardous Substance (EHS)
CAS #: 05-4901-4	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Flammable Liquefied Gas (3.2I)

Hazardous Material Type	☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):	
Physical State	☐ Solid ☐ Liquid ☒ Gas	Largest Container: 10.75		
Federal Hazard Categories	☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None			
Average Daily Amount: 10.75	Maximum Daily Amount: 21.5	Annual Waste Amount:	State Waste Code:	
Units (If EHS, amount must be in pounds)	☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:	

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: LAB	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: Hydrogen Peroxide	Grid #:

II. Chemical Information

Chemical Name: Hydrogen Peroxide			☐ Trade Secret (If subject to EPCRA, refer to instructions)		
Common Name:			☒ Extremely Hazardous Substance (EHS)		
CAS #: 7722-84-1			if EHS is Yes, all amounts below must be in lbs.		
Fire Code Hazard Class (Check none if not applicable): Flammable Liquid, Class I-A (3.3 I-A)					
Hazardous Material Type	☐ Pure	☒ Mixture	☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State	☐ Solid	☒ Liquid	☐ Gas	Largest Container: 16.0	
Federal Hazard Categories	☒ Fire	☐ Reactive	☐ Pressure Release	☐ Acute Health	☐ Chronic Health ☐ None
Average Daily Amount: 80.0	Maximum Daily Amount: 160.0		Annual Waste Amount:		State Waste Code:
Units (If EHS, amount must be in pounds)	☐ Cubic Feet	☐ Pounds	☐ Tons	☐ Gallons	Days on Site:
	☒ Ounces (Liquid)	☐ Barrels (42 gal)	☐ Liters	☐ Cubic Meters	
	☐ Ounces (Weight)	☐ Grams	☐ Curies		

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure	☒ Ambient	☐ Above Ambient	☐ Below Ambient	
Storage Temperature	☒ Ambient	☐ Above Ambient	☐ Below Ambient	☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Lab	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: SP Buffered 10% Formalin	Grid #:

II. Chemical Information

Chemical Name: SP Buffered 10% Formalin	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name: SP Buffered 10% Formalin	☒ Extremely Hazardous Substance (EHS)
CAS #: 506 93-4, 9002-93-1, 67-63-0	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Flammable Liquid, Class I-A (3.3 I-A)

Hazardous Material Type	☐ Pure	☒ Mixture	☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State	☐ Solid	☒ Liquid	☐ Gas	Largest Container: 0.1	

Federal Hazard Categories: ☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None

Average Daily Amount: 0.7000000000000001	Maximum Daily Amount: 1.4000000000000001	Annual Waste Amount:	State Waste Code:

Units (If EHS, amount must be in pounds): ☐ Cubic Feet ☐ Pounds ☐ Tons ☒ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies

Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☒ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure: ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature: ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
4.0	Formaldehyde	☒	50-00-0
1.0	Methyl Alcohol	☐	67-56-1
0.4	Monobasic Sodium Phosphate	☐	10049-21-5
0.65	Dibasic Sodium Phosphate	☐	7558-79-4
90.0	Water	☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: ORSPD	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: Stainless Steel & Polish	Grid #:

II. Chemical Information

Chemical Name: Stainless Steel & Polish	☐ Trade Secret (If subject to EPCRA, refer to instructions)
Common Name:	☐ Extremely Hazardous Substance (EHS)
CAS #: 06-4351-0	if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Combustible Liquid, Class II (1.1 II)

Hazardous Material Type	☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):	
Physical State	☐ Solid ☒ Liquid ☐ Gas	Largest Container: 21.0		
Federal Hazard Categories	☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None			
Average Daily Amount: 21.0	Maximum Daily Amount: 42.0	Annual Waste Amount:	State Waste Code:	
Units (If EHS, amount must be in pounds)	☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:	

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☒ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
40.7	Water	☐	7732-18-5
10.3	White Mineral Oil	☐	8042-47-5
7.13	Isobutane	☒	75-28-5
1.5	Sorbitan Oleate	☐	1338-43-8
1.0	Ethanolomine	☐	141-43-5

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital

Chemical location: ORSPD

☐ Chemical location confidential

Facility ID#: FA0014577/PR0027245

Map # or Name: Steris 20 Sterile Concentrate

Grid #:

II. Chemical Information

Chemical Name: Steris 20 Sterile Concentrate

☐ Trade Secret (If subject to EPCRA, refer to instructions)

Common Name:

☐ Extremely Hazardous Substance (EHS)

CAS #: s2000, s2008, s2009, and s2011

if EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Corrosive (CORR)

Hazardous Material Type: ☐ Pure ☒ Mixture ☐ Waste

☐ Radioactive

Curies (If radioactive):

Physical State: ☐ Solid ☒ Liquid ☐ Gas

Largest Container: 1.0

Federal Hazard Categories: ☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None

Average Daily Amount: 70.0

Maximum Daily Amount: 140.0

Annual Waste Amount:

State Waste Code:

Units (If EHS, amount must be in pounds): ☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies

Days on Site:

☐ Above Ground Tank
☐ Steel Drum
☐ Carboy
☐ Bag
☐ Glass Bottle
☐ Tank Wagon
☐ Flammabe Liquid Cabinet
☐ Portable
☐ Underground Tank
☐ Plastic/Nonmetallic Drum
☐ Silo
☒ Box
☐ Plastic Bottle
☐ Rail Car
☐ Sealed Source
☐ None
☐ Tank Inside Building
☐ Can
☐ Fiber Drum
☐ Cylinder
☐ Tote Bin
☐ Other
☐ Plastic Pail

Storage Pressure: ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature: ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
35.5	Peracetic Acid	☐	79-21-0
40.0	Acetic Acid	☐	64-19-7
6.5	Hydrogen Peroxide	☒	7722-84-1
1.0	Sulfuric Acid	☒	7664-93-9
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital

Chemical location: OR

☐ Chemical location confidential

Facility ID#: FA0014577/PR0027245

Map # or Name: Hydrogen Peroxide

Grid #:

II. Chemical Information

Chemical Name: Hydrogen Peroxide

☐ Trade Secret (If subject to EPCRA, refer to instructions)

Common Name: Hydrogen Peroxide

☒ Extremely Hazardous Substance (EHS)

CAS #: 7722-84-1

If EHS is Yes, all amounts below must be in lbs.

Fire Code Hazard Class (Check none if not applicable): Flammable Liquid, Class I-A (3.3 I-A)

Hazardous Material Type: ☐ Pure ☒ Mixture ☐ Waste

☐ Radioactive

Curies (If radioactive):

Physical State: ☐ Solid ☒ Liquid ☐ Gas

Largest Container: 16.0

Federal Hazard Categories: ☒ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☐ Chronic Health ☐ None

Average Daily Amount: 56.0

Maximum Daily Amount: 112.0

Annual Waste Amount:

State Waste Code:

Units (If EHS, amount must be in pounds): ☐ Cubic Feet ☐ Pounds ☐ Tons ☐ Gallons ☒ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies

Days on Site:

☐ Above Ground Tank
☐ Steel Drum
☐ Carboy
☐ Bag
☐ Glass Bottle
☐ Tank Wagon
☐ Flammabe Liquid Cabinet
☐ Portable
☐ Underground Tank
☐ Plastic/Nonmetallic Drum
☐ Silo
☐ Box
☒ Plastic Bottle
☐ Rail Car
☐ Sealed Source
☐ None
☐ Tank Inside Building
☐ Can
☐ Fiber Drum
☐ Cylinder
☐ Tote Bin
☐ Other
☐ Plastic Pail

Storage Pressure: ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature: ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Dept./Plan Operations	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: CS-405P	Grid #:

II. Chemical Information

Chemical Name: CS-405P	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: Sodium Nitrite	☒ Extremely Hazardous Substance (EHS)	
CAS #: 7632-00-0	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): None		
Hazardous Material Type ☐ Pure ☒ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 10.0	
Federal Hazard Categories ☐ Fire ☐ Reactive ☐ Pressure Release ☒ Acute Health ☐ Chronic Health ☐ None		
Average Daily Amount: 5.0	Maximum Daily Amount: 10.0	Annual Waste Amount: / State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☐ Pounds ☐ Tons ☒ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☐ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☒ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
10.0	Sodium Tolytriazole	☐	64665-57-2
20.0	Sodium metaborate	☐	10555-76-7
		☐	
		☐	
		☐	

If EPCRA, please sign here

CITY OF RIVERSIDE
FIRE DEPARTMENT

Chemical Description Form

I. Facility Information

Business Name: Riverside Community Hospital		
Chemical location: Engineering Dept./Plant Operations	☐ Chemical location confidential	
Facility ID#: FA0014577/PR0027245	Map # or Name: CL-120	Grid #:

II. Chemical Information

Chemical Name: CL-120	☐ Trade Secret (If subject to EPCRA, refer to instructions)	
Common Name: Hydrochloric Acid	☐ Extremely Hazardous Substance (EHS)	
CAS #: 7647-01-0	if EHS is Yes, all amounts below must be in lbs.	
Fire Code Hazard Class (Check none if not applicable): Corrosive (CORR)		
Hazardous Material Type ☒ Pure ☐ Mixture ☐ Waste	☐ Radioactive	Curies (If radioactive):
Physical State ☐ Solid ☒ Liquid ☐ Gas	Largest Container: 150.0	
Federal Hazard Categories ☐ Fire ☐ Reactive ☐ Pressure Release ☐ Acute Health ☒ Chronic Health ☐ None		
Average Daily Amount: 75.0	Maximum Daily Amount: 150.0	Annual Waste Amount: / State Waste Code:
Units (If EHS, amount must be in pounds) ☐ Cubic Feet ☒ Pounds ☐ Tons ☐ Gallons ☐ Ounces (Liquid) ☐ Barrels (42 gal) ☐ Liters ☐ Cubic Meters ☐ Ounces (Weight) ☐ Grams ☐ Curies		Days on Site:

☐ Above Ground Tank	☐ Underground Tank	☐ Tank Inside Building
☐ Steel Drum	☒ Plastic/Nonmetallic Drum	☐ Can
☐ Carboy	☐ Silo	☐ Fiber Drum
☐ Bag	☐ Box	☐ Cylinder
☐ Glass Bottle	☐ Plastic Bottle	☐ Tote Bin
☐ Tank Wagon	☐ Rail Car	☐ Other
☐ Flammabe Liquid Cabinet	☐ Sealed Source	☐ Plastic Pail
☐ Portable	☐ None	

Storage Pressure ☒ Ambient ☐ Above Ambient ☐ Below Ambient

Storage Temperature ☒ Ambient ☐ Above Ambient ☐ Below Ambient ☐ Cryogenic

%WT	Hazardous Componenent (For mixture or waste only)	EHS	CAS #
		☐	
		☐	
		☐	
		☐	
		☐	

If EPCRA, please sign here

City of Riverside
Finance Department

BILLING ADVICE

Name
Dudek
Attn: Susie Smith
Address
3685 Main Street # 350

Riverside — City
CA — State
92501 — Zip

Telephone No. 951 (Area Code) 300-2100 (Phone Number)

Date: 06/20/13
Customer No.:
Requested by: Cathy Mitchell
Department: Fire
Division: Prevention (Optional)
Rate: (Finance Use Only)

ACCOUNT SUMMARY DISTRIBUTION

GENERAL LEDGER		JOB LEDGER (If Required)			
GL KEY	GL OBJECT	JL KEY	JL OBJECT	WORK ORDER	AMOUNT
		0010135210	34121000		32.50
		0010129060	34122000		3.30
				TOTAL AMOUNT DUE	35.80

DESCRIPTION: (The description will be included on the Invoice)

Hazardous Records Search for:
4445 Magnolia Street, Riverside, CA 92501
4000 14th Street, Riverside, CA 92501
4500 Brockton Avenue, Riverside, CA 92501
Services: 0.5 hour(s) =$32.50 at $65/hour for clerical
Copying Fees: $3.30
Copy Fees: $.60 first page, $.10 each additional page

Fin:AR-1:4/01

Photograph 1 - Looking west from the eastern boundary of the subject property.

Photograph 2 - Looking north at the subject property from the eastern boundary.

Photograph 3 - Looking southeast at Building N with Buildings C and G in the background.

Photograph 4 - Looking southeast at the parking structure (Buildings I and J).

	Photograph 5 - Looking northeast at the parking structure construction area.
	Photograph 6 - The theater located to the north of the subject property.

Photograph 7 - Looking northeast across 14th Street at the adjacent school.

Photograph 8 - Looking north from the intersection of 14th Street and Brockton Avenue at the adjacent medical office building.

Photograph 9 - Auto body shop located to the north of the subject property.

Photograph 10 - Medical offices located to the north of the subject property (subject property is to the right in the photograph).

Photograph 11 - Looking northeast along Brockton Avenue at the neighboring properties.

Photograph 12 - Looking east across 14th Street at an adjacent vacant lot.

Photograph 13 - Looking east across 14th Street at an adjacent gas station.

Photograph 14 - Looking southeast across Magnolia Avenue at an adjacent sports medicine complex.

Photograph 15 - Medical office building located west-northwest of the subject property.

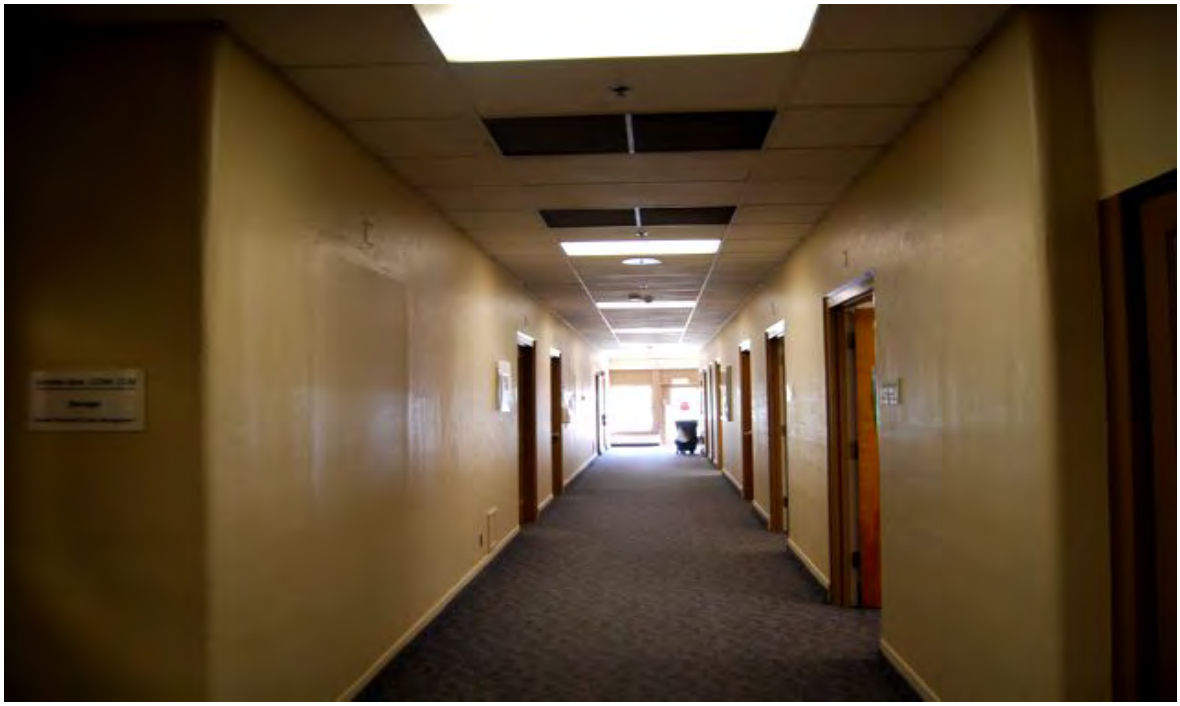
Photograph 16 - Looking northwest at a vacant lot across Brockton Avenue near the western portion of the subject property.

Photograph 17 - Church located to the south of the subject property.

Photograph 18 - Sports complex located to the south of the subject property.

Photograph 19 - Looking west at the building located to the west/ southwest of the subject property.

Photograph 20 - Laboratory located in Building A.



Photograph 21 - Building A main floor hallway.

Photograph 22 - Medical records storage room located in the Building A basement.

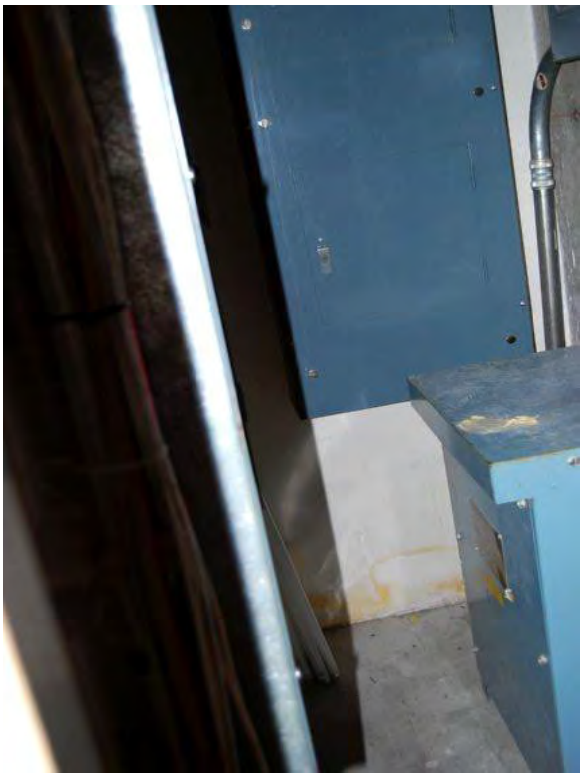
Photograph 23 - Building A basement hallway.

Photograph 24 - Hydraulic elevator room located in the basement of Building A.

Photograph 25 - Electrical transformer located in the basement of Building A.

Photograph 26 - Looking east-northeast at Building N and the associated parking lot.

Photograph 27 - Electrical transformers located in the Building N MRI Computer Room.



Photograph 28 - Electrical transformers located in Building N.

Photograph 29 - Mechanical elevator room on the rooftop level of Building N.

Photograph 30 - Boilers located on the rooftop level of Building N.

Photograph 31 - Air handlers located on the rooftop level of Building N.

Photograph 32 - Stained asphalt in the Building N parking lot.

Photograph 33 - Rooftop level of the parking structure.

Photograph 34 - Waste storage area located in the parking structure.

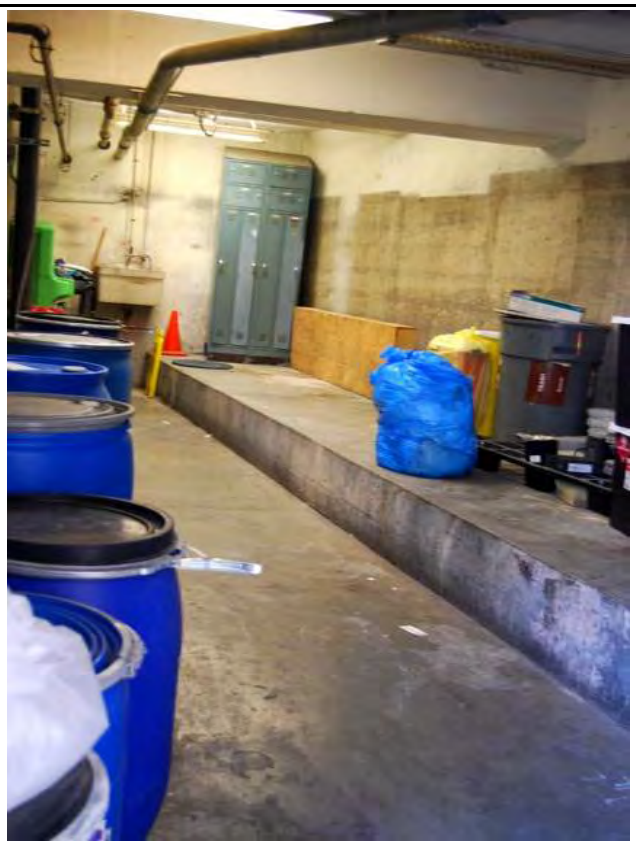
Photograph 35 - Two unlabeled 55-gallon drums located in the parking structure waste storage area.

Photograph 36 - Equipment storage area located in the parking structure.

Photograph 37 - Hydraulic reservoirs in the parking structure elevator rooms. The photograph on the right is associated with the non-operational elevator.

Photograph 38 - Stained parking surface in the parking structure.

Photograph 39 - Grated drains adjacent to Building N and the parking structure.



Photograph 40 - Hazardous materials storage area located in the northeast portion of the subject property.

Photograph 41 - Disturbed soil along the western portion of the subject property.

Photograph 42 - Suspect floor tiles located in the basement and elevator of Building A.

Photograph 43 - Suspect floor and ceiling tiles located in Building N (MRI Computer Room and medical office).

Photograph 44 - Underground storage tank located on the northeastern portion of the subject property between Buildings F and G.

Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92506

Inquiry Number: 3602238.5
May 14, 2013

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

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Milford, CT 06461
800.352.0050
www.edrnet.com

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Date EDR Searched Historical Sources:

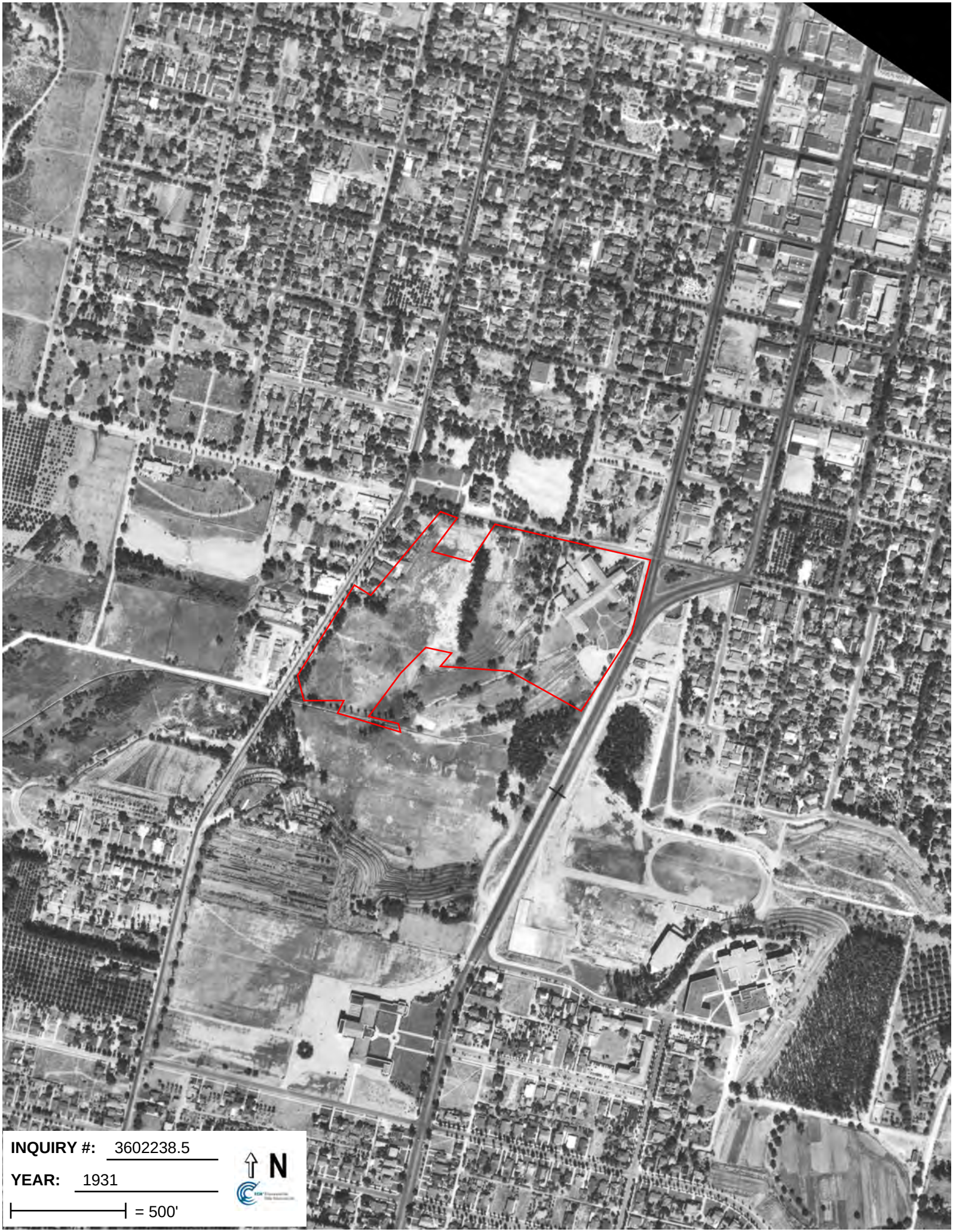
Aerial Photography May 14, 2013

Target Property:

4445 Magnolia Avenue

Riverside, CA 92506

Year	***Scale***	***Details***	***Source***
1931	Aerial Photograph. Scale: 1"=500'	Flight Year: 1931	Fairchild
1938	Aerial Photograph. Scale: 1"=500'	Flight Year: 1938	Laval
1948	Aerial Photograph. Scale: 1"=500'	Flight Year: 1948	USGS
1953	Aerial Photograph. Scale: 1"=500'	Flight Year: 1953	Pacific Air
1967	Aerial Photograph. Scale: 1"=500'	Flight Year: 1967	Western
1977	Aerial Photograph. Scale: 1"=500'	Flight Year: 1977	Teledyne
1989	Aerial Photograph. Scale: 1"=500'	Flight Year: 1989	USGS
1994	Aerial Photograph. Scale: 1"=500'	/DOQQ - acquisition dates: 1994	EDR
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	EDR
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	EDR
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	EDR
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	EDR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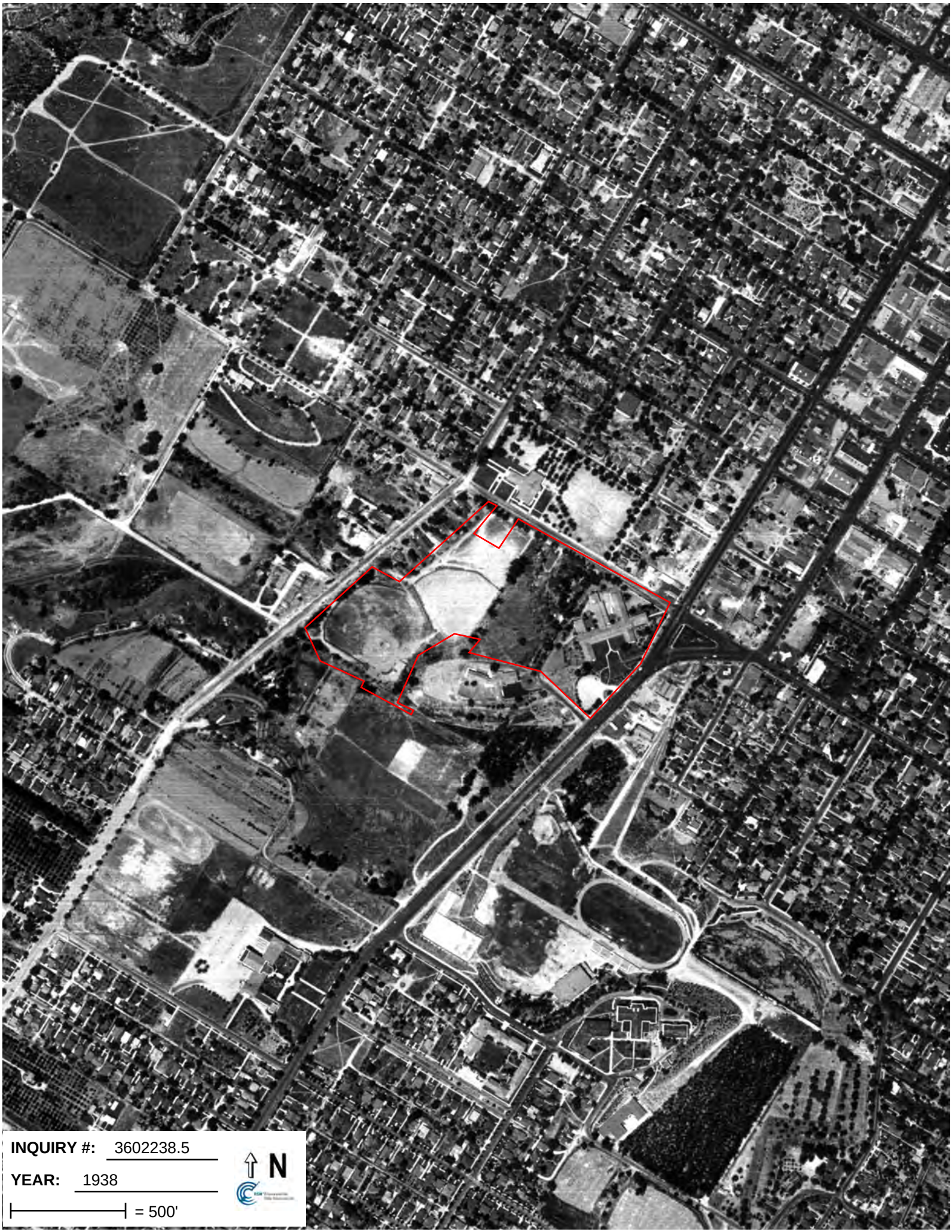
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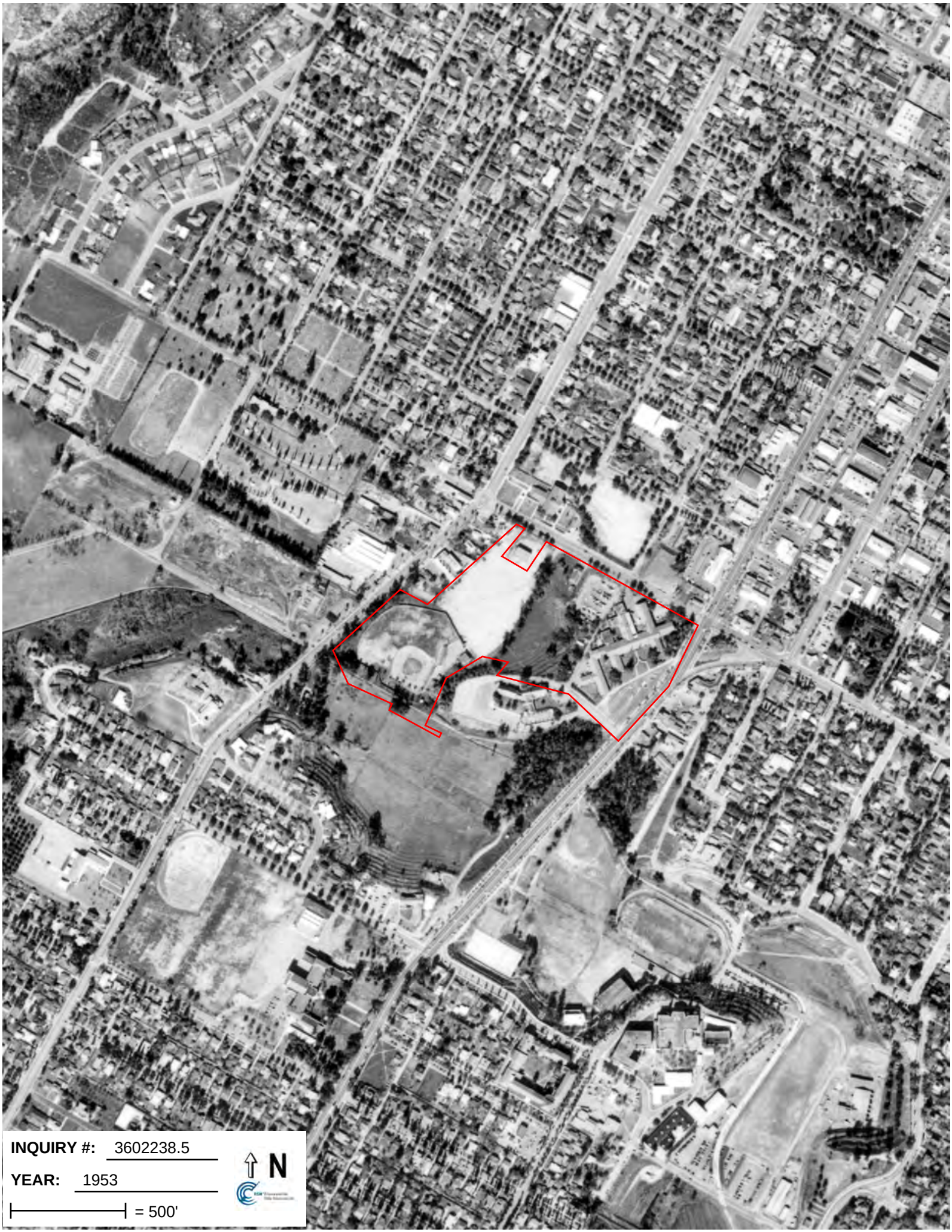
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YEAR: 1989
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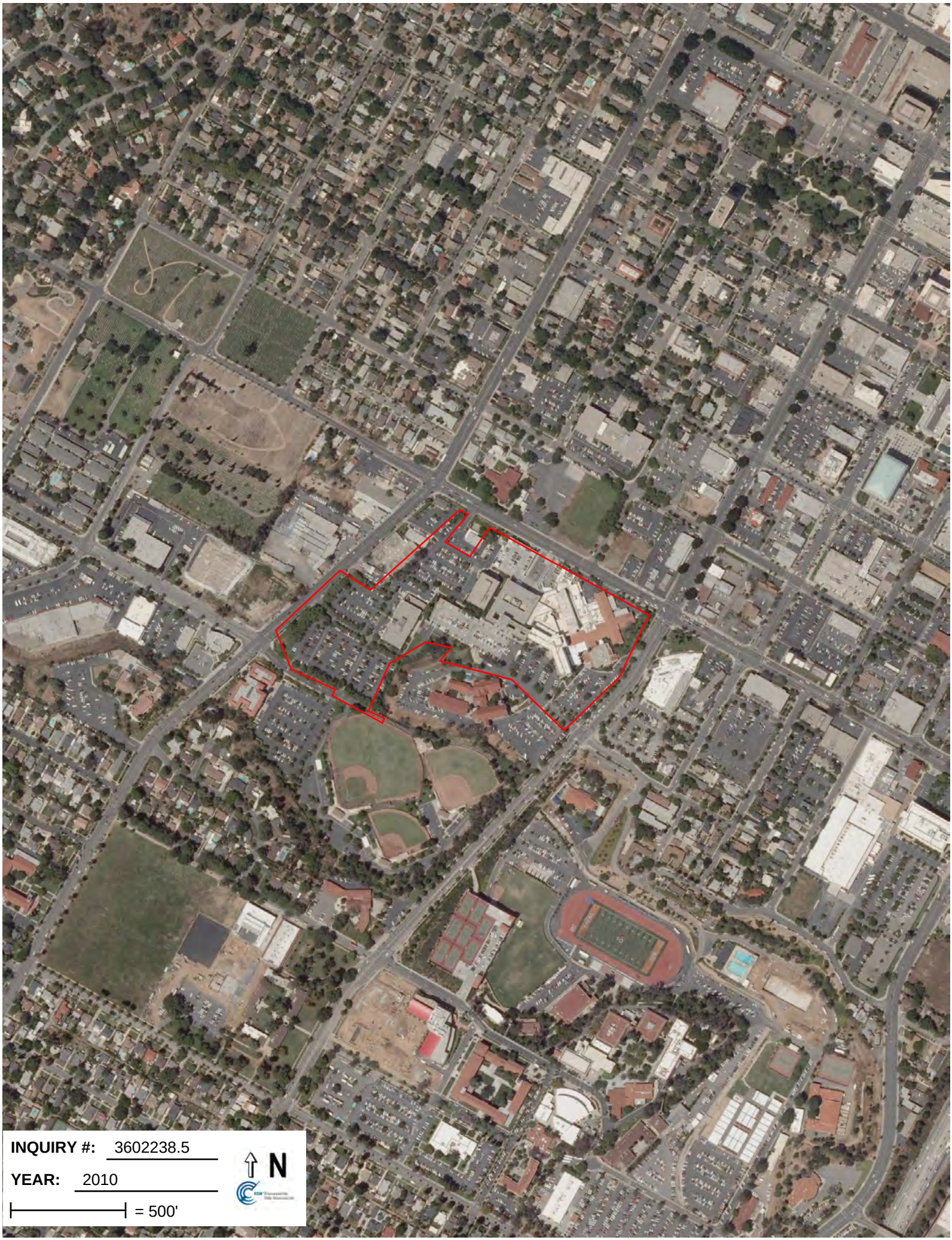
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INQUIRY #: 3602238.5
YEAR: 2012
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Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92506

Inquiry Number: 3602238.4
May 09, 2013

EDR Historical Topographic Map Report

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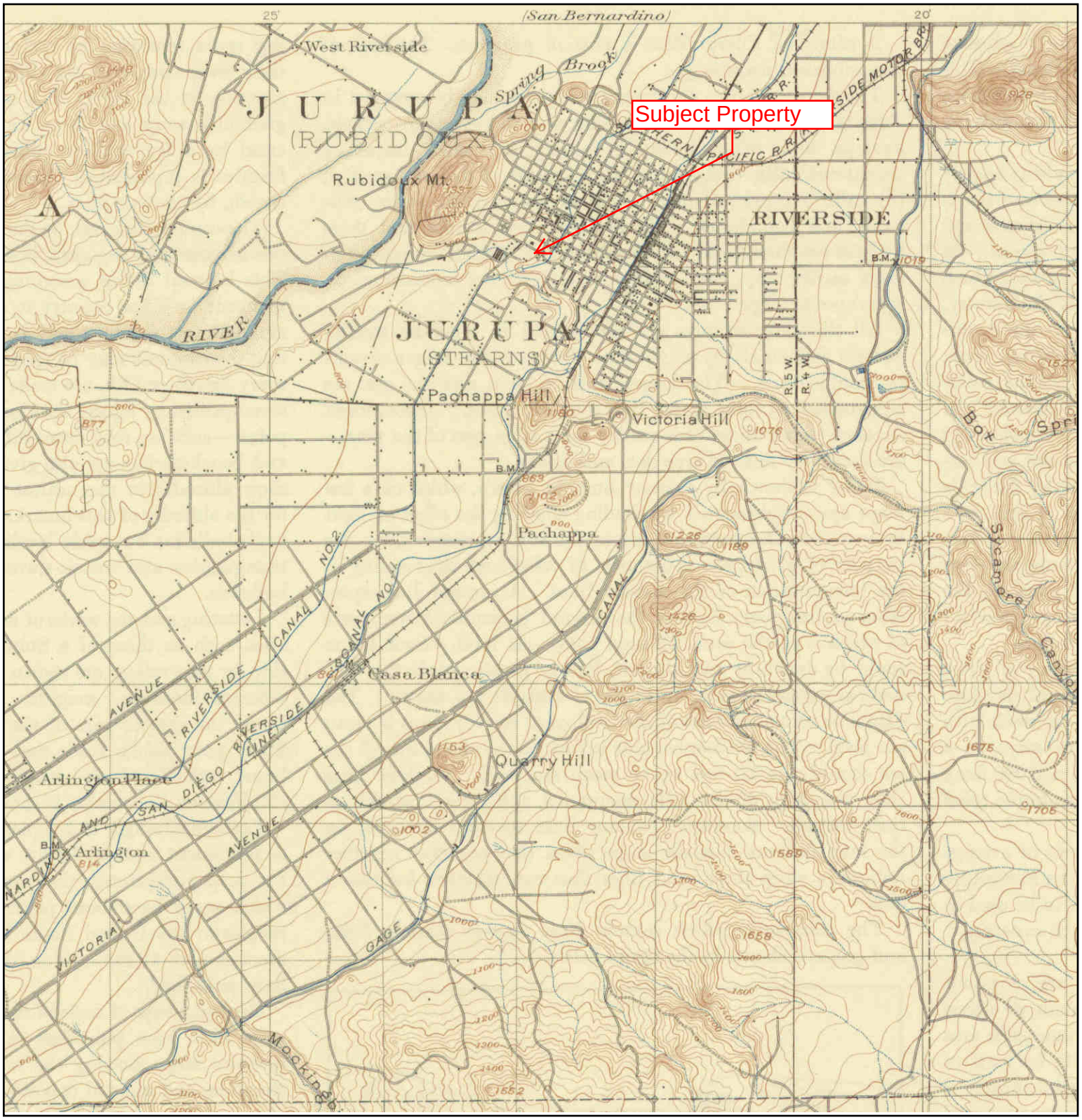
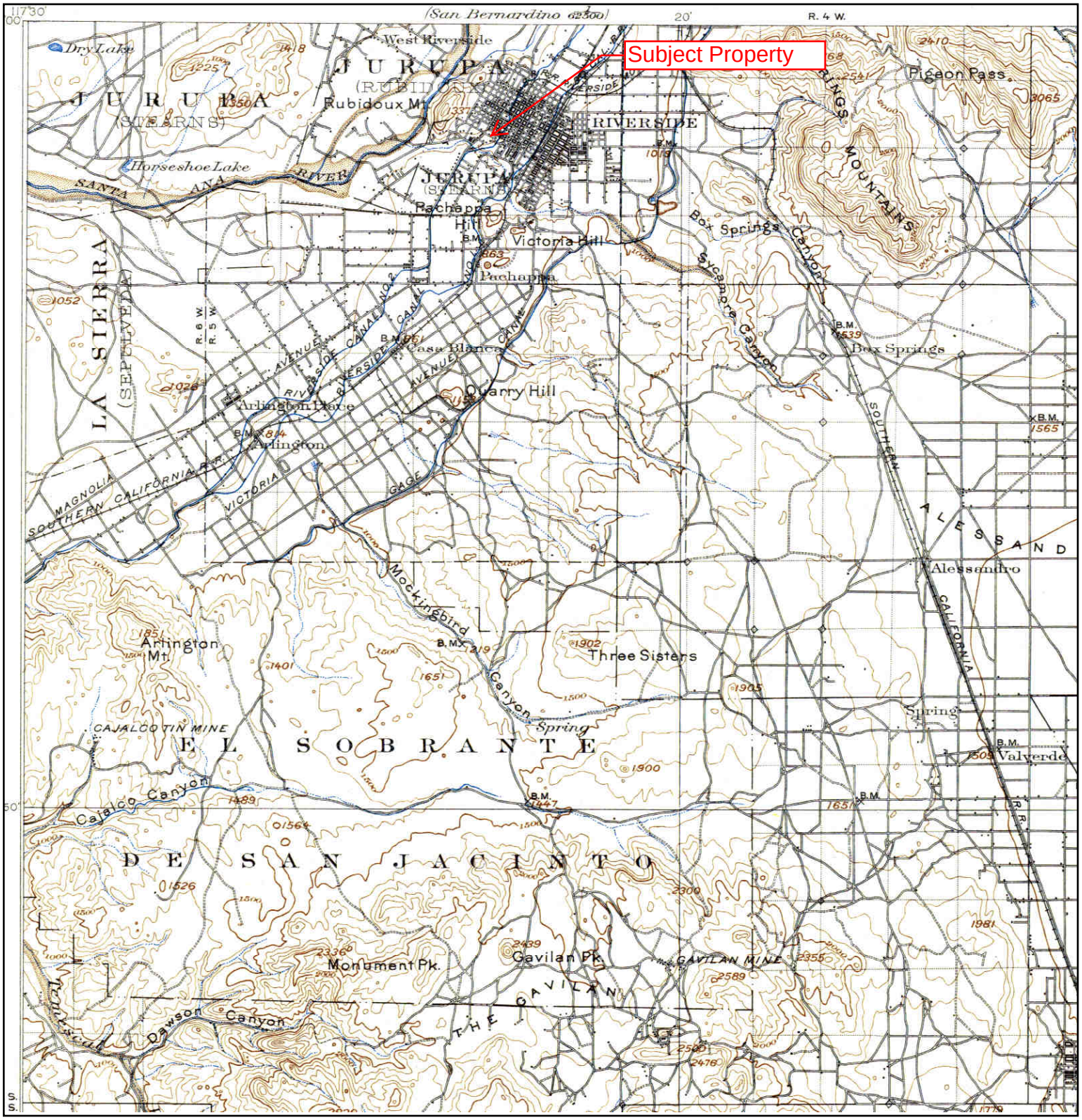
Historical Topographic Map



N	TARGET QUAD NAME: RIVERSIDE MAP YEAR: 1901 SERIES: 15 SCALE: 1:62500	SITE NAME: Riverside Community Hospital ADDRESS: 4445 Magnolia Avenue Riverside, CA 92506 LAT/LONG: 33.9765 / -117.3823	CLIENT: Dudek & Associates CONTACT: Rachel Ganiere INQUIRY#: 3602238.4 RESEARCH DATE: 05/09/2013

Historical Topographic Map



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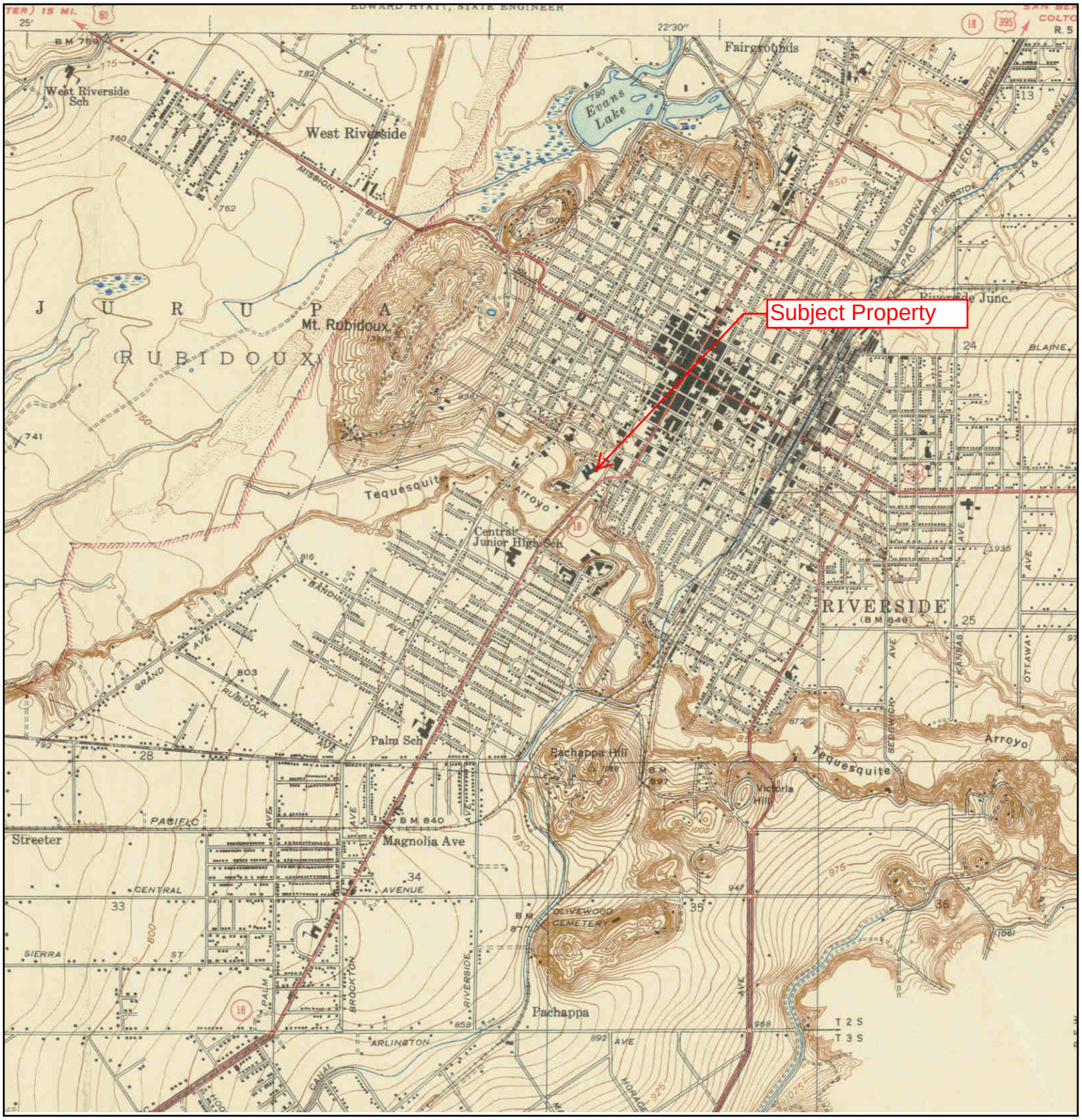
Historical Topographic Map

N	**TARGET QUAD** NAME: SOUTHERN CA SHEET 1 MAP YEAR: 1901 SERIES: 60 SCALE: 1:250000	SITE NAME: Riverside Community Hospital ADDRESS: 4445 Magnolia Avenue Riverside, CA 92506 LAT/LONG: 33.9765 / -117.3823	CLIENT: Dudek & Associates CONTACT: Rachel Ganiere INQUIRY#: 3602238.4 RESEARCH DATE: 05/09/2013

Historical Topographic Map



Unsurveyed Area on the Topographic Map

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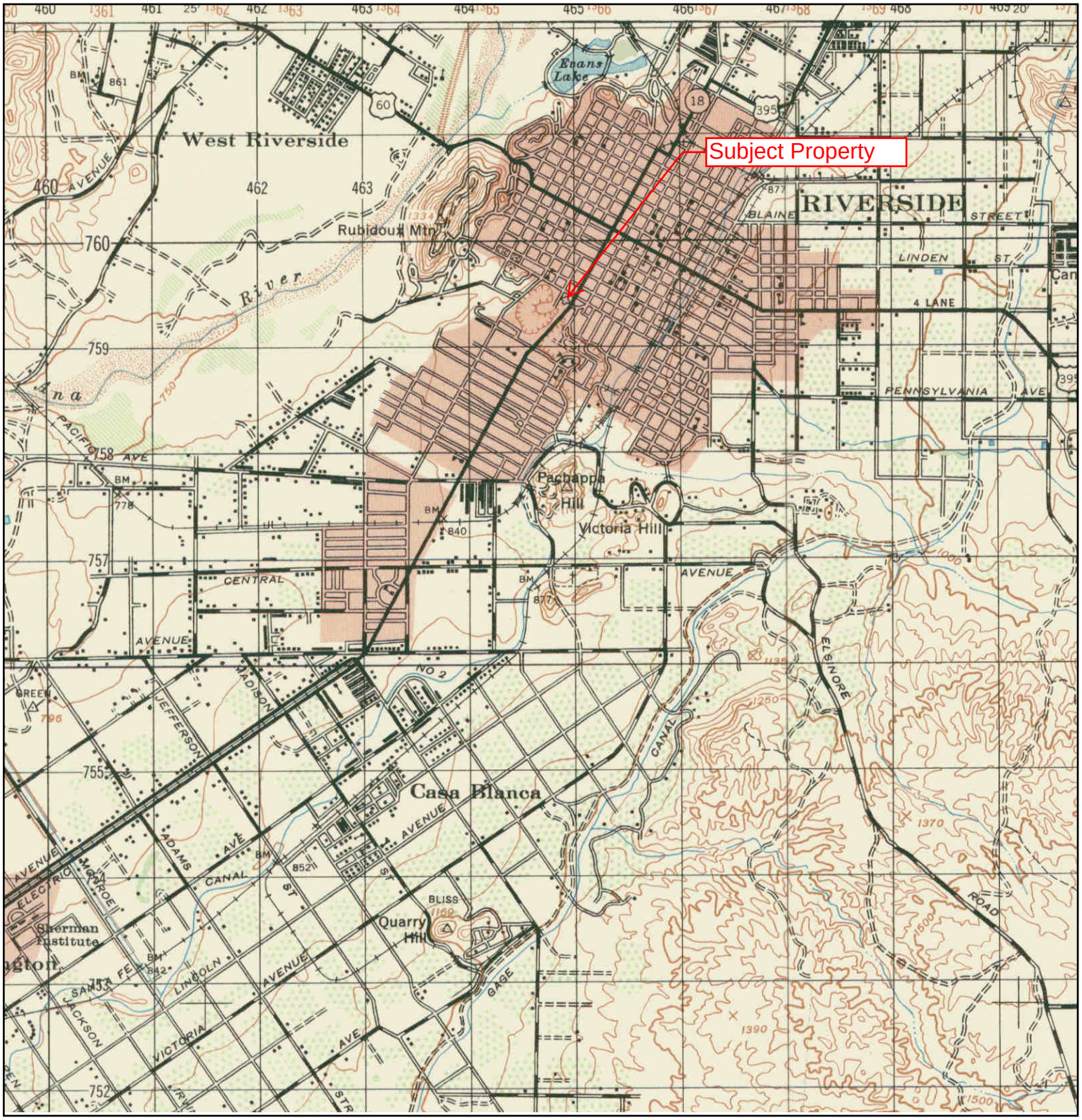
Historical Topographic Map



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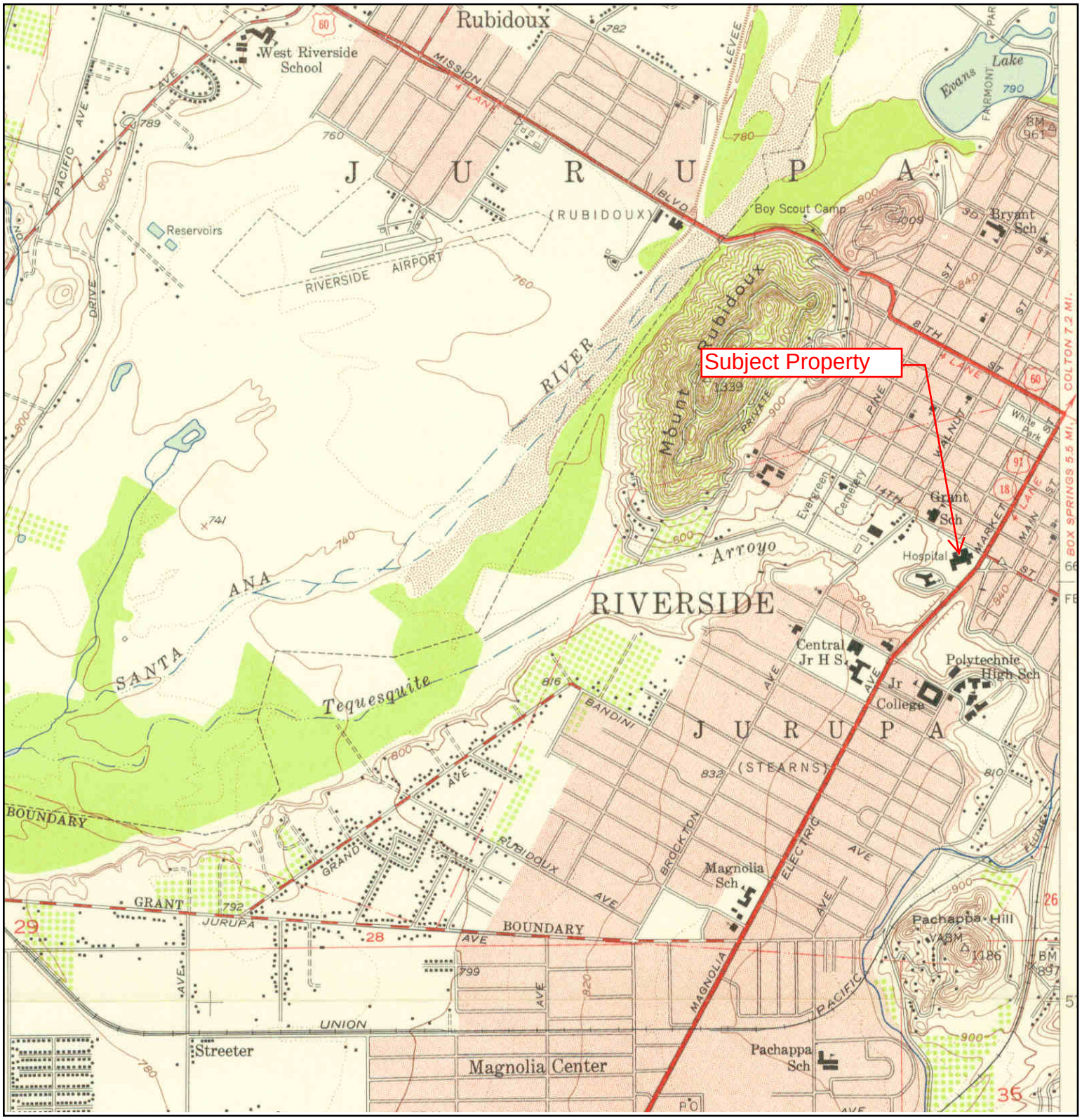
Historical Topographic Map



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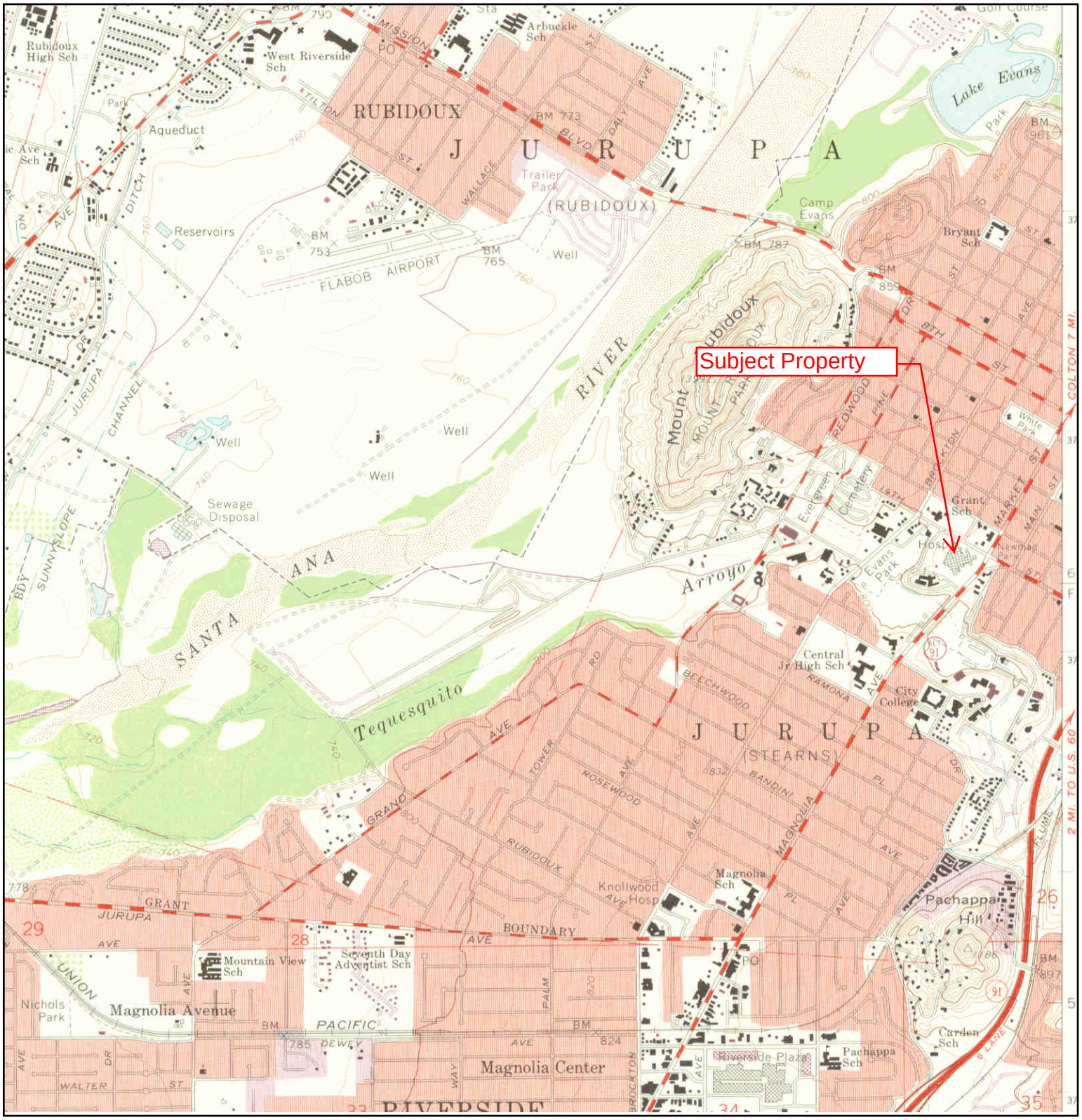
Historical Topographic Map

N	TARGET QUAD NAME: RIVERSIDE WEST MAP YEAR: 1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Riverside Community Hospital ADDRESS: 4445 Magnolia Avenue Riverside, CA 92506 LAT/LONG: 33.9765 / -117.3823	CLIENT: Dudek & Associates CONTACT: Rachel Ganiere INQUIRY#: 3602238.4 RESEARCH DATE: 05/09/2013

Historical Topographic Map



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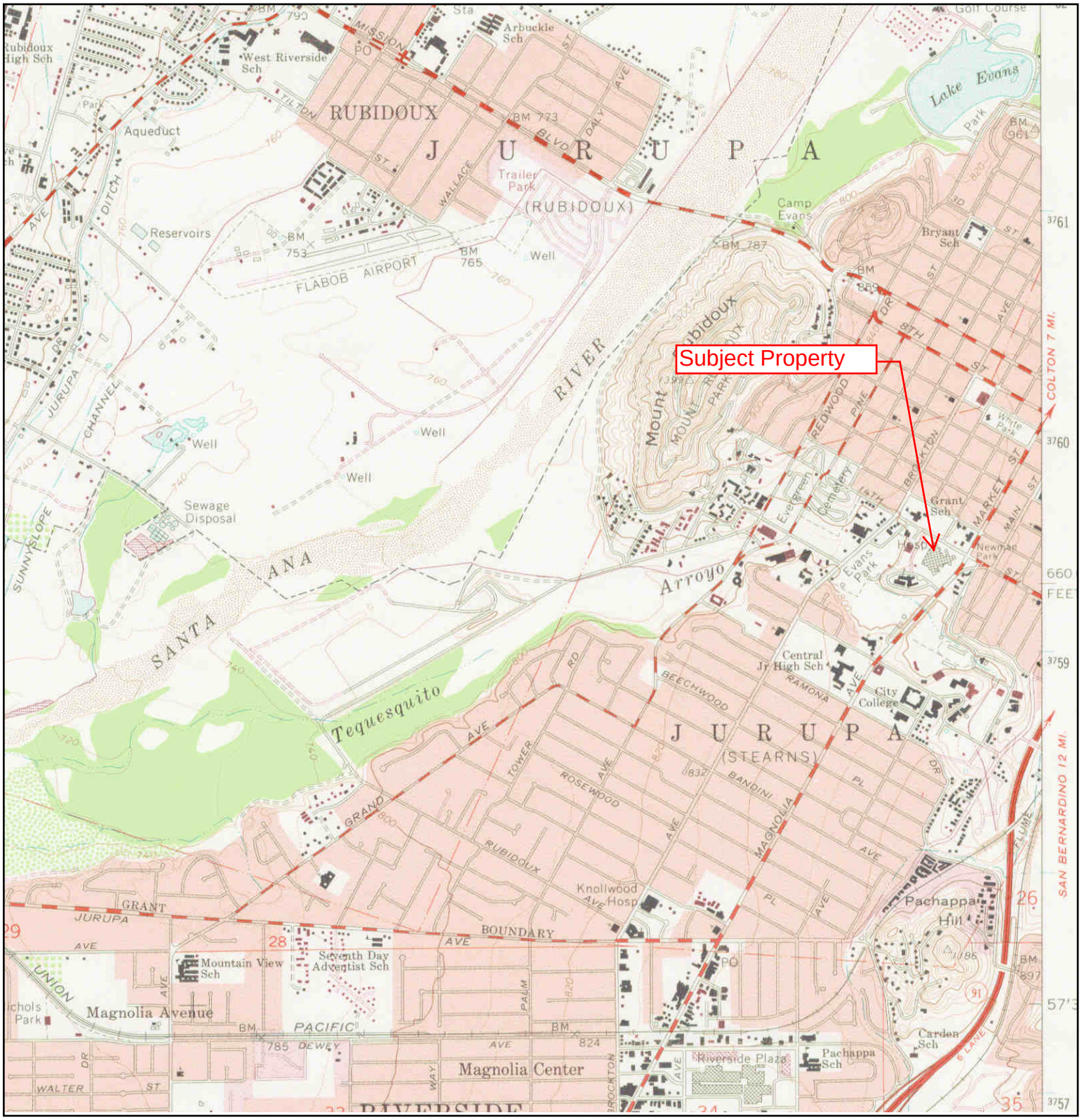
Historical Topographic Map



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Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92506

Inquiry Number: 3602238.3
May 09, 2013

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5/09/13

Site Name:
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92506

Client Name:
Dudek & Associates
605 Third Street
Encinitas, CA 92024

EDR Inquiry # 3602238.3

Contact: Rachel Ganiere

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Certified Sanborn Results:

Site Name: Riverside Community Hospital
Address: 4445 Magnolia Avenue
City, State, Zip: Riverside, CA 92506
Cross Street:
P.O. # NA
Project: 7824-5
Certification # 7E3C-41BE-B6E4

Maps Provided:

1969	1959	1952
1968	1958	1950
1965	1957	1908
1962	1955	
1961	1954	
1960	1953	

Sanborn® Library search results
Certification # 7E3C-41BE-B6E4

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- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

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Sanborn Sheet Thumbnails

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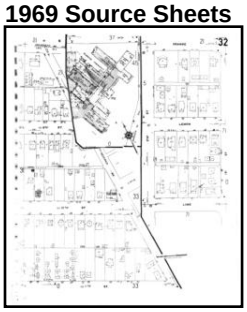
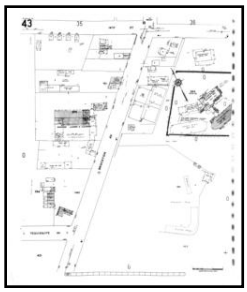
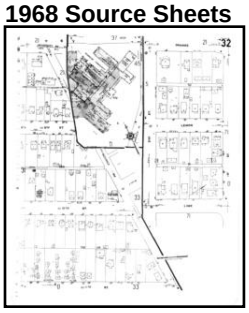


Volume 1, Sheet 32



Volume 1, Sheet 43

1968 Source Sheets

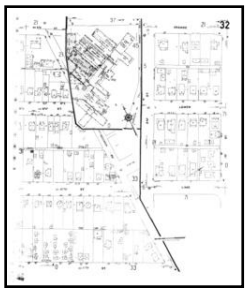


Volume 1, Sheet 32

Volume 1, Sheet 43

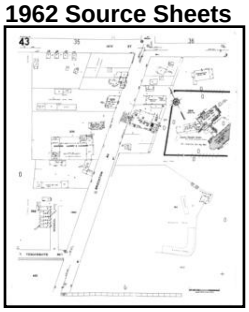
1965 Source Sheets

Volume 1, Sheet 43



Volume 1, Sheet 32

1962 Source Sheets



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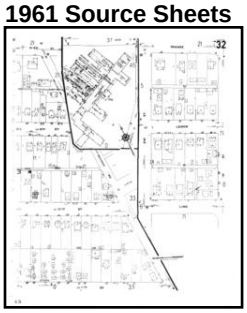
1961 Source Sheets



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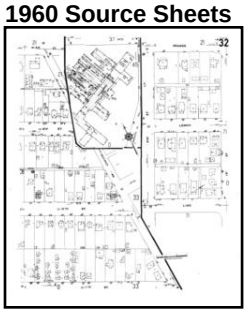
1960 Source Sheets



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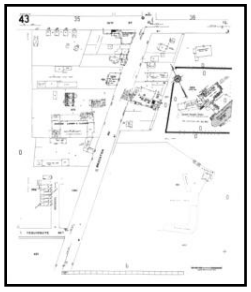

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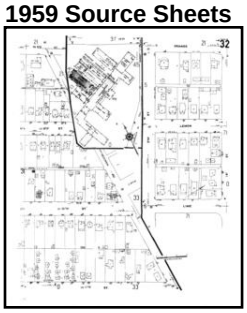
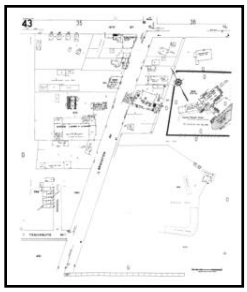
1959 Source Sheets



Volume 1, Sheet 32



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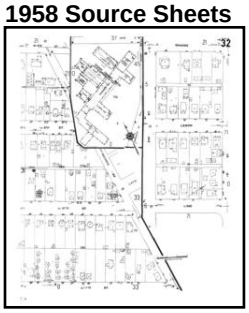
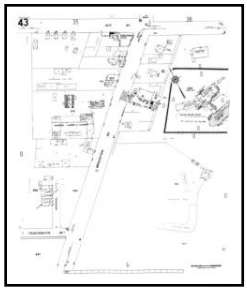
1958 Source Sheets



Volume 1, Sheet 32



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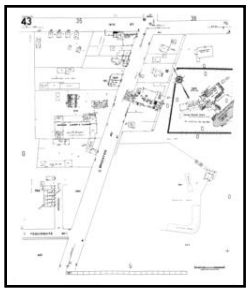
1957 Source Sheets

Volume 1, Sheet 32



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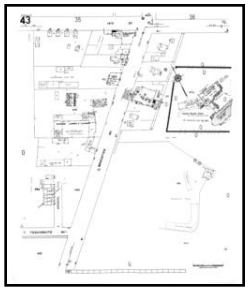
1955 Source Sheets

Volume 1, Sheet 32



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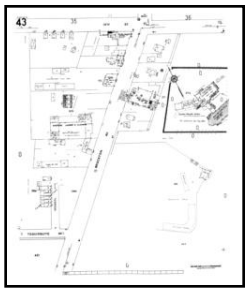
1954 Source Sheets

Volume 1, Sheet 32



Volume 1, Sheet 43

1953 Source Sheets

Volume 1, Sheet 32

Volume 1, Sheet 43

1952 Source Sheets

Volume 1, Sheet 32

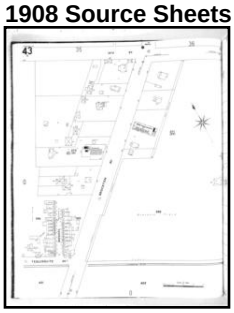
Volume 1, Sheet 43

1950 Source Sheets

Volume 1, Sheet 32

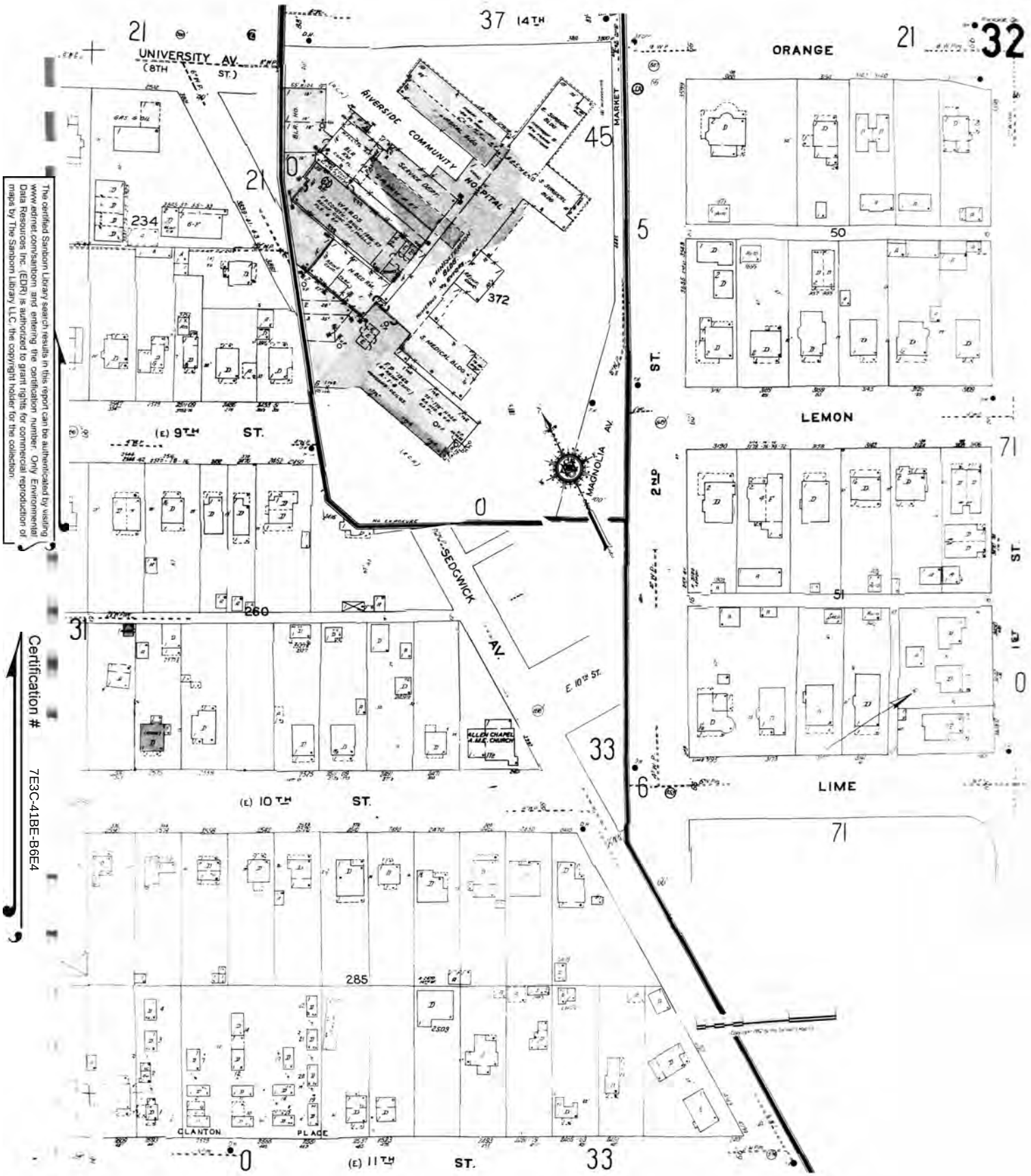
Volume 1, Sheet 43

1908 Source Sheets



Volume 1, Sheet 43

1969 Certified Sanborn Map



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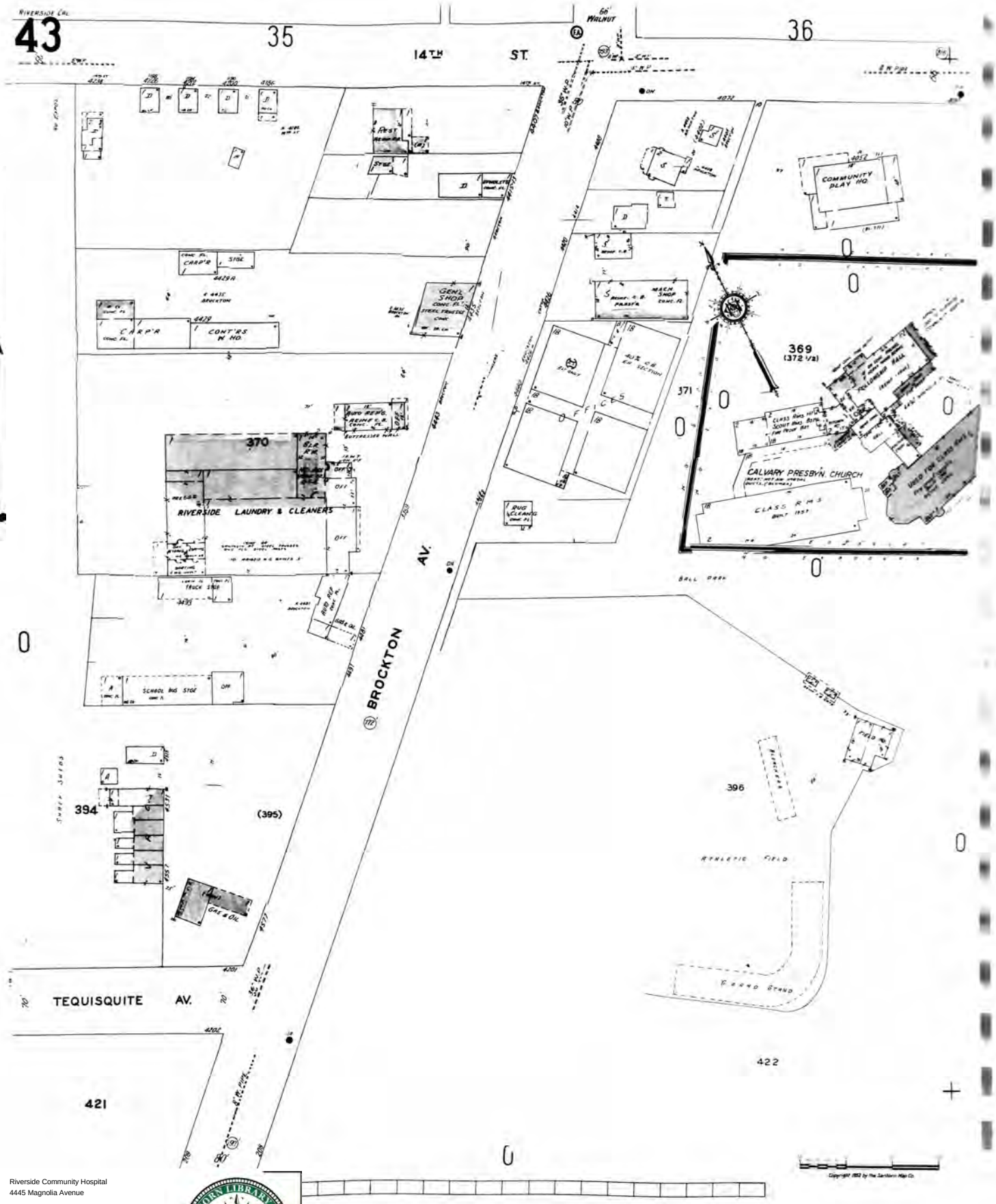
Address:	4445 Magnolia Avenue
City, ST, ZIP:	Riverside CA 92506
Client:	Dudek & Associates
EDR Inquiry:	3602238.3
Order Date:	5/9/2013 2:51:05 PM
Certification #	7E3C-41BE-B6E4
Copyright:	1969

1969 Certified Sanborn Map



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Client:	Dudek & Associates
EDR Inquiry:	3602238.3
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Certification #	7E3C-41BE-B6E4
Copyright:	1969

1968 Certified Sanborn Map

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Copyright:	1968

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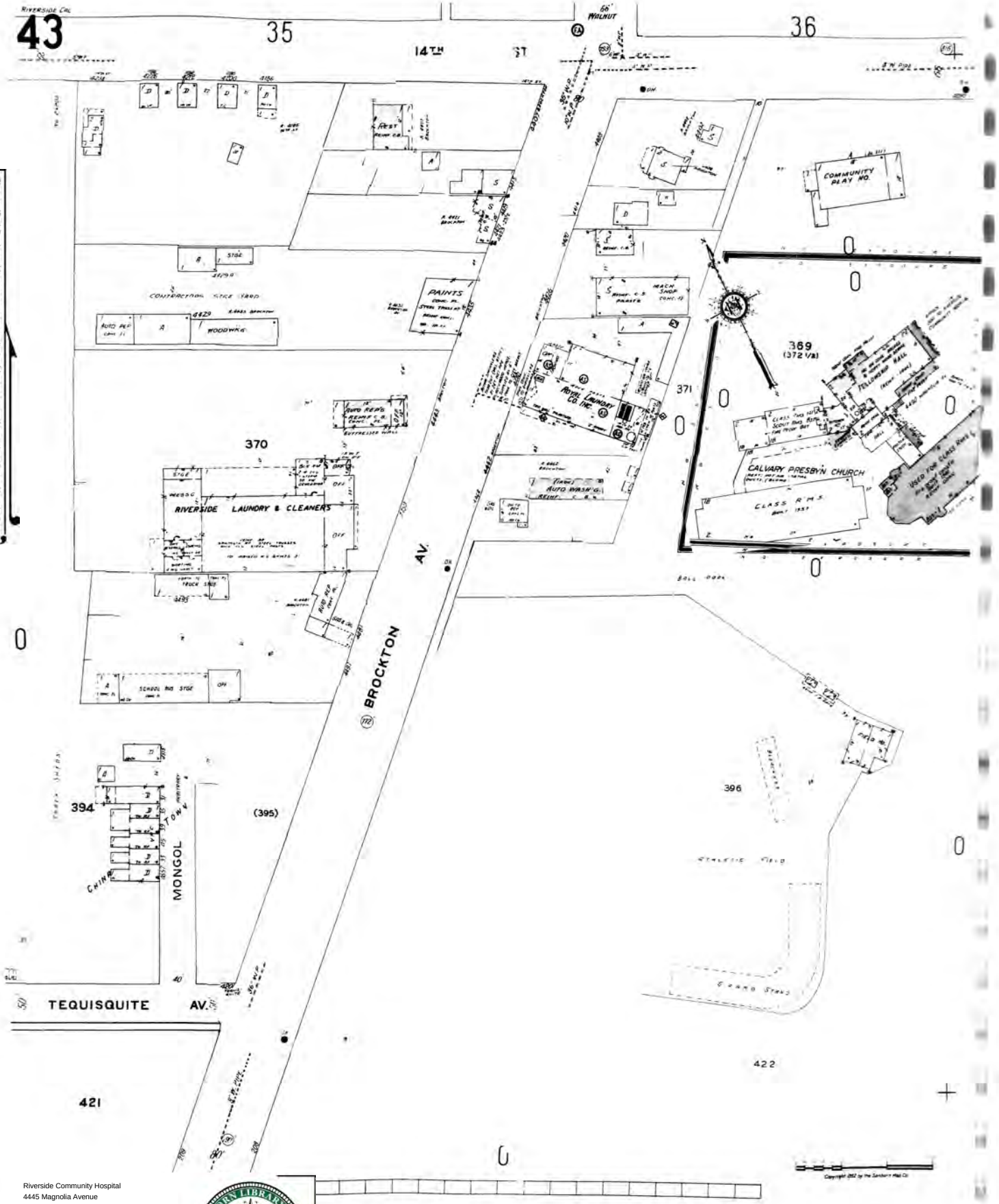
Order Date:	5/9/2013 2:51:05 PM
Certification #	7E3C-41BE-B6E4
Copyright:	1968

1965 Certified Sanborn Map



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Copyright:	1965

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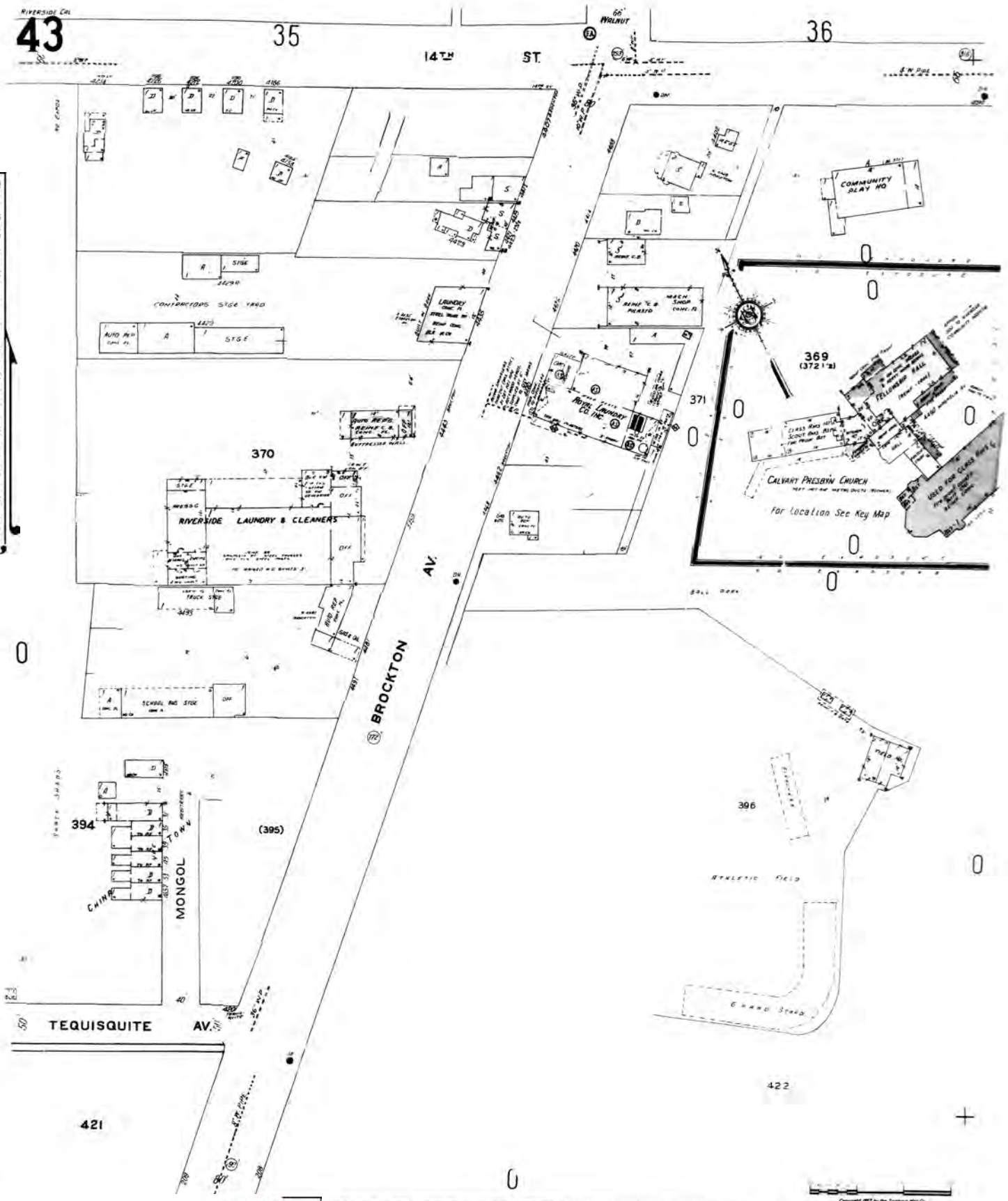
Certification #	7E3C-41BE-B6E4
Copyright:	1965

1962 Certified Sanborn Map



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Copyright:	1962

1962 Certified Sanborn Map

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Copyright:	1962

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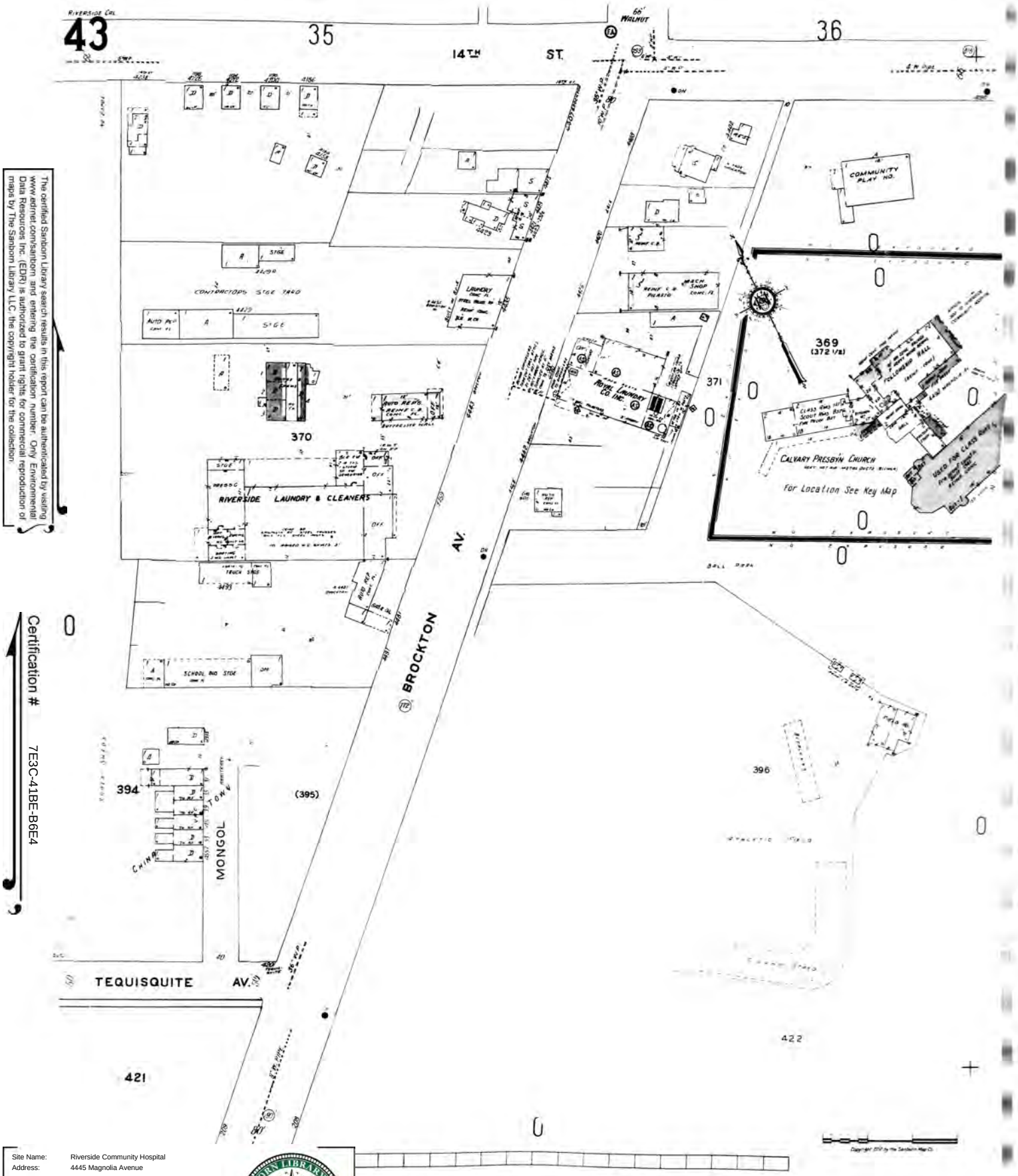
Certification #	7E3C-41BE-B6E4
Copyright:	1961

1961 Certified Sanborn Map



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Copyright:	1961

1960 Certified Sanborn Map

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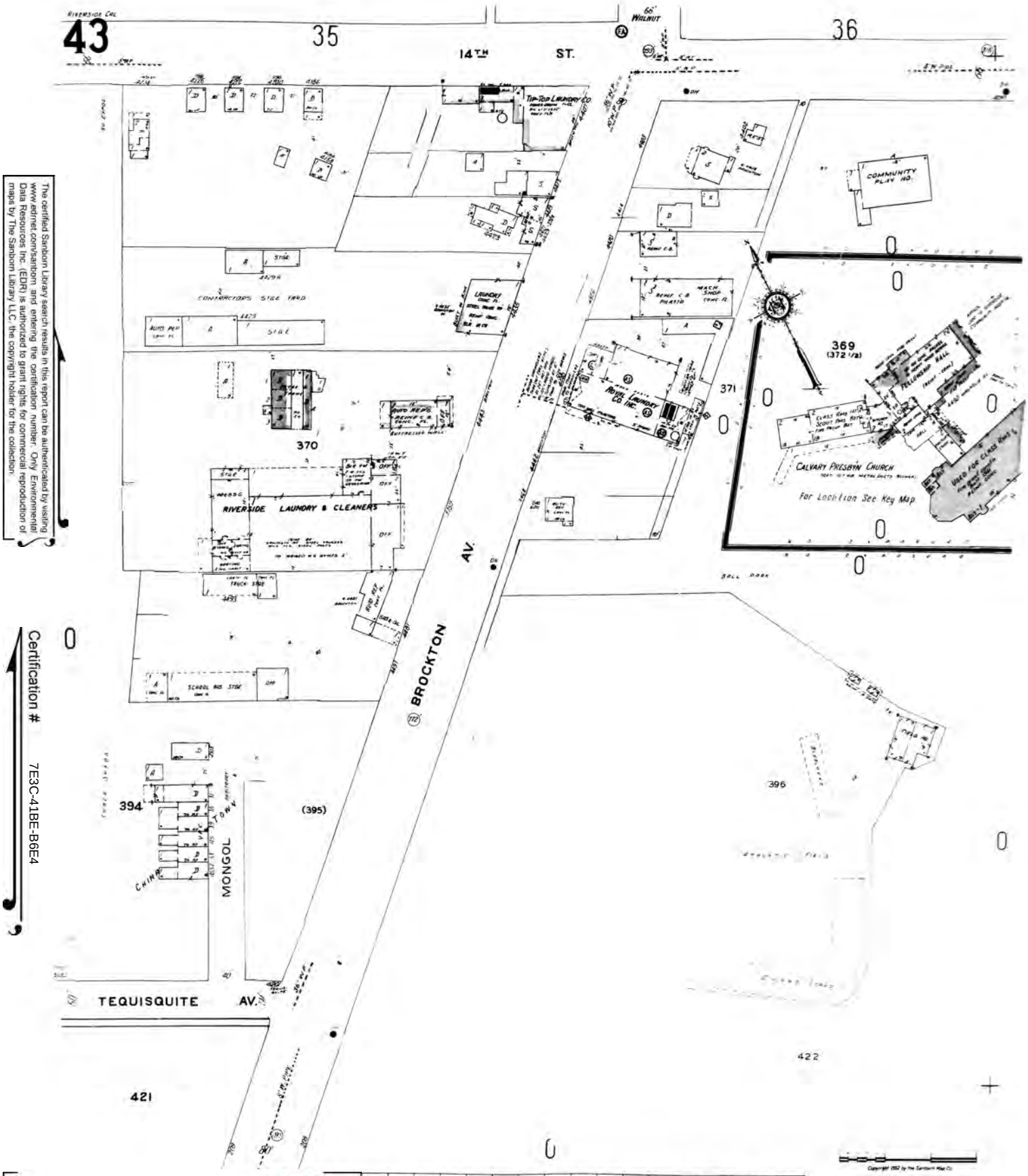
Certification #	7E3C-41BE-B6E4
Copyright:	1960

1960 Certified Sanborn Map



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Copyright:	1960

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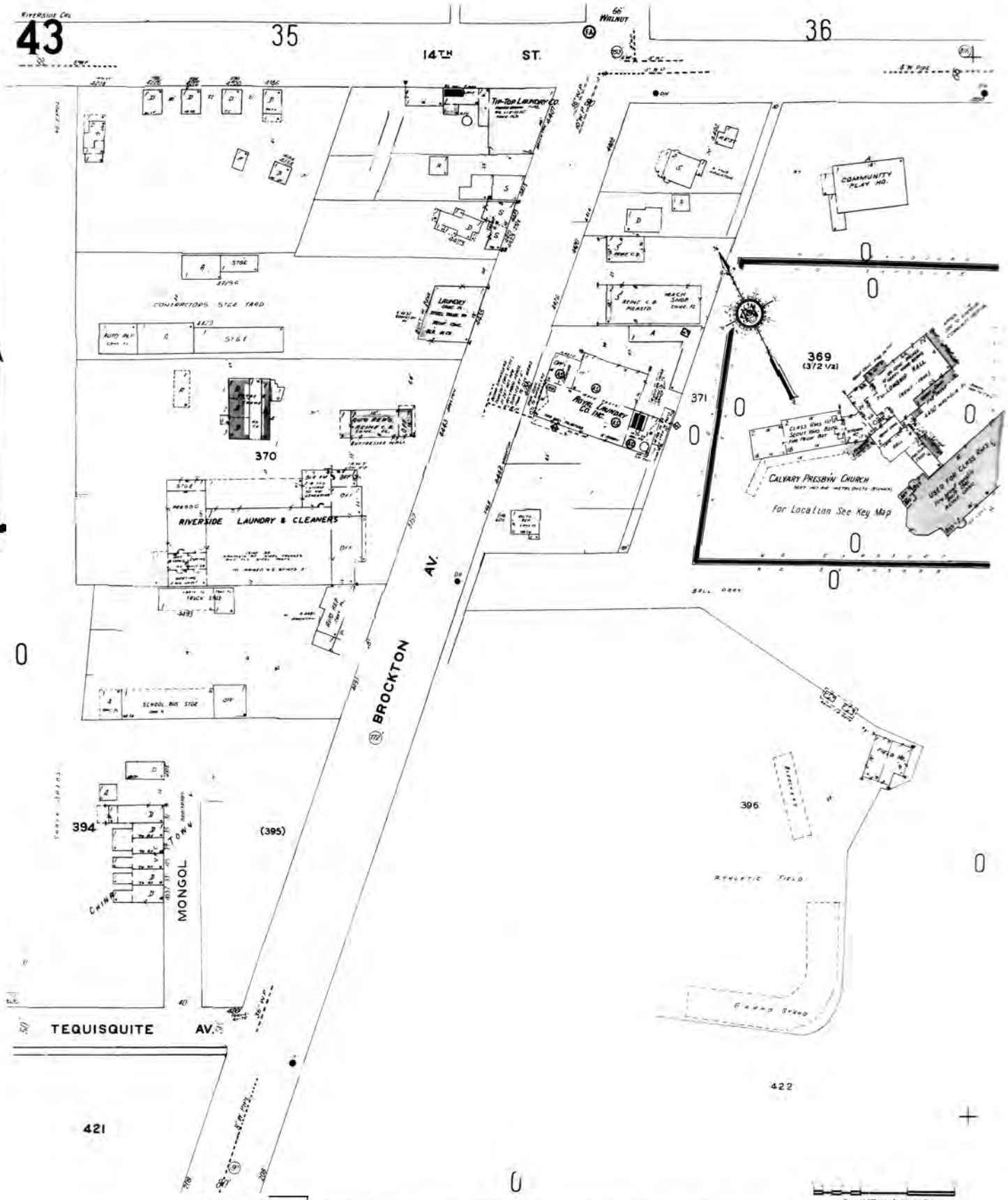
Certification #	7E3C-41BE-B6E4
Copyright:	1959

1959 Certified Sanborn Map



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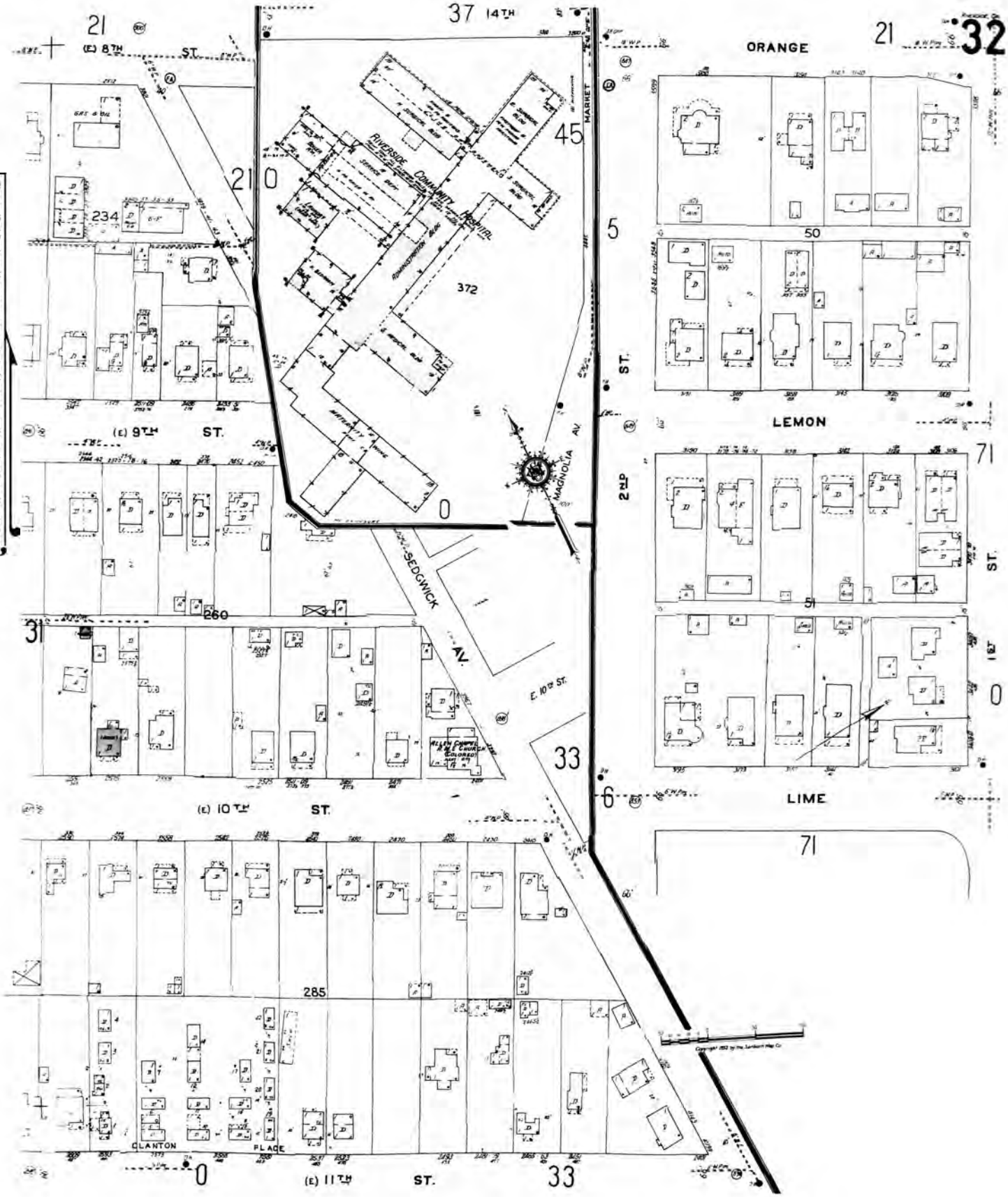
Copyright:	1959

1958 Certified Sanborn Map



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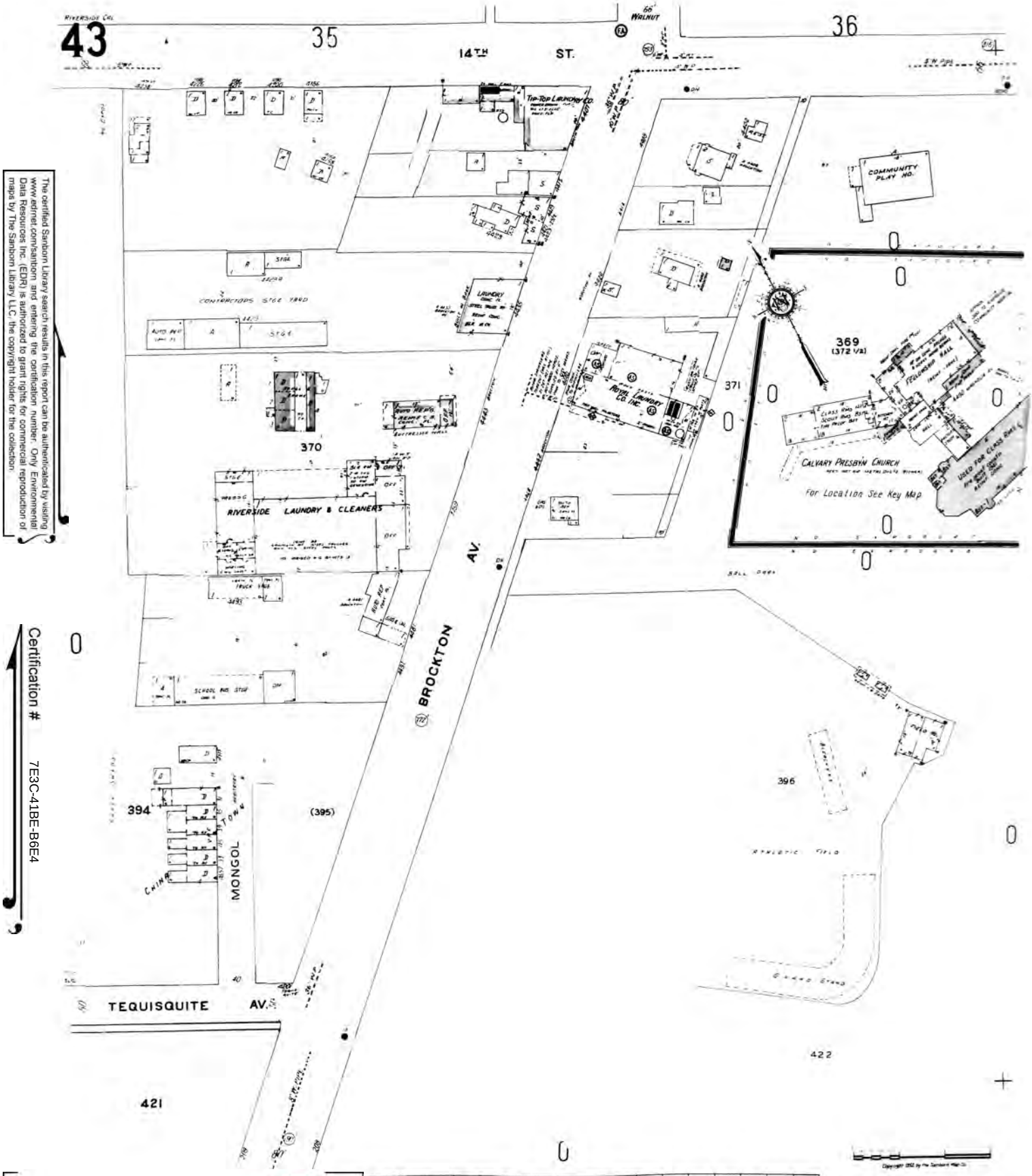
Copyright:	1958

1958 Certified Sanborn Map



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Copyright:	1958

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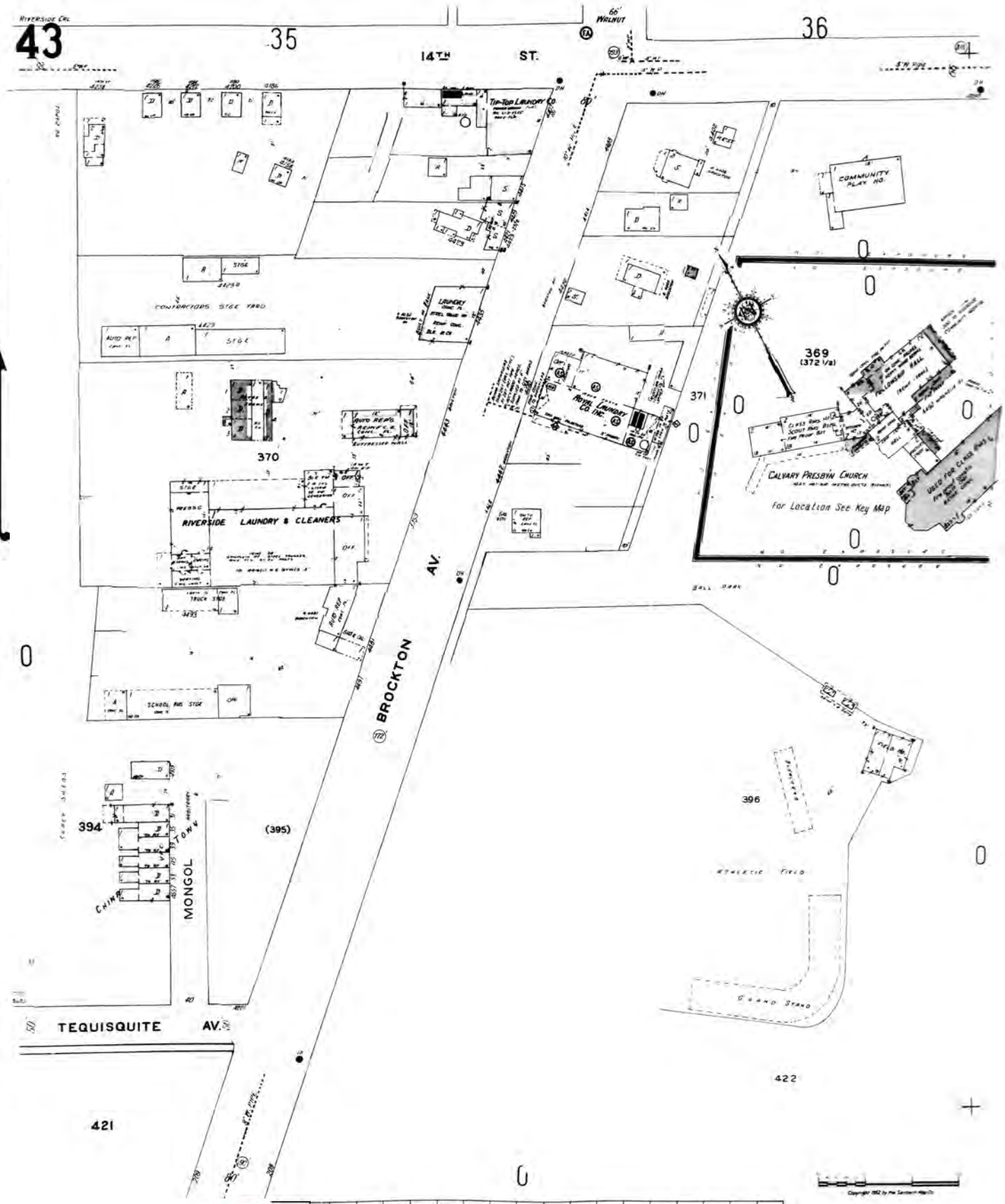
Copyright:	1957

1957 Certified Sanborn Map



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Certification #	7E3C-41BE-B6E4
Copyright:	1957

1955 Certified Sanborn Map

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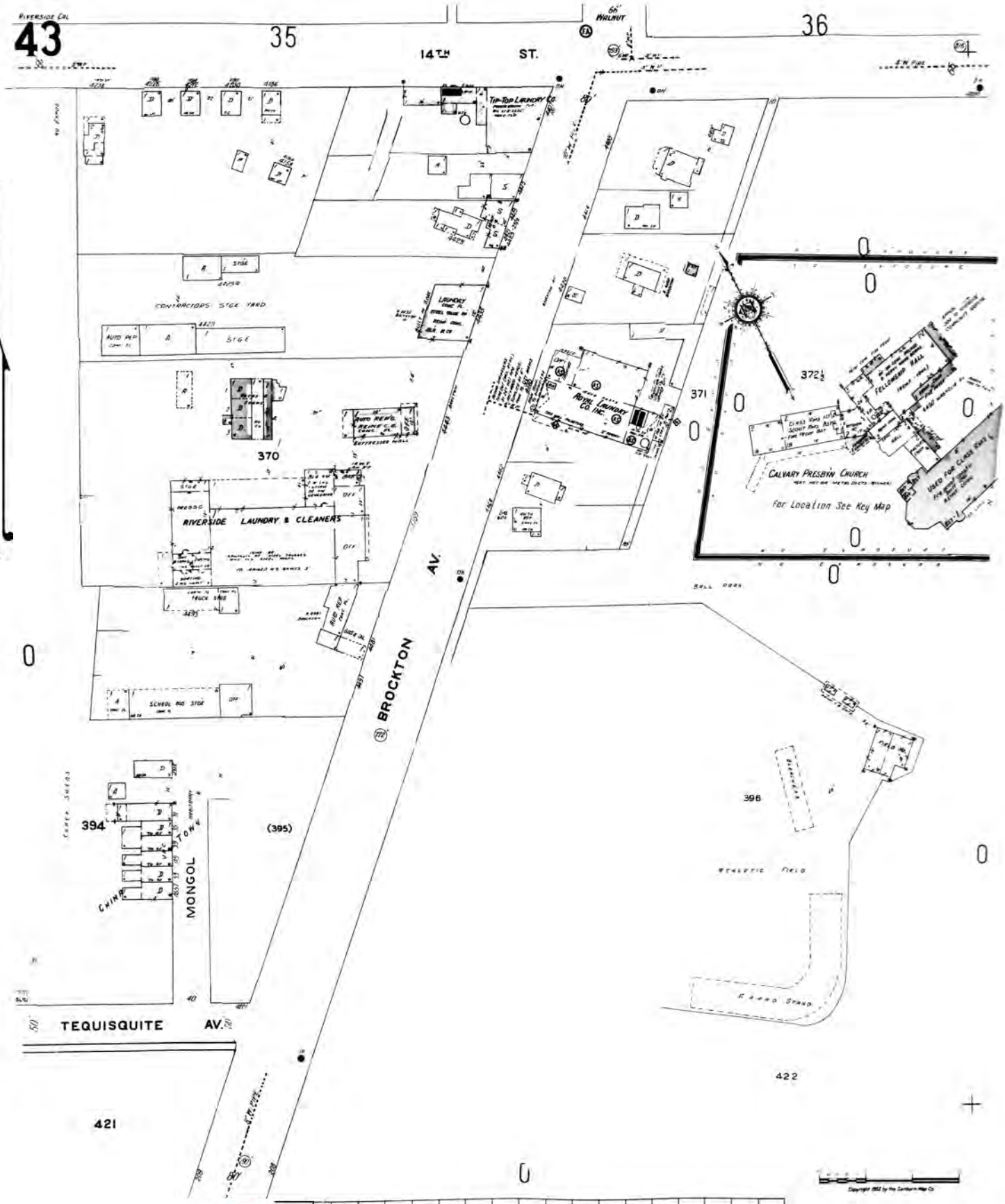
Order Date:	5/9/2013 2:51:05 PM
Certification #	7E3C-41BE-B6E4

Copyright: 1955

1955 Certified Sanborn Map



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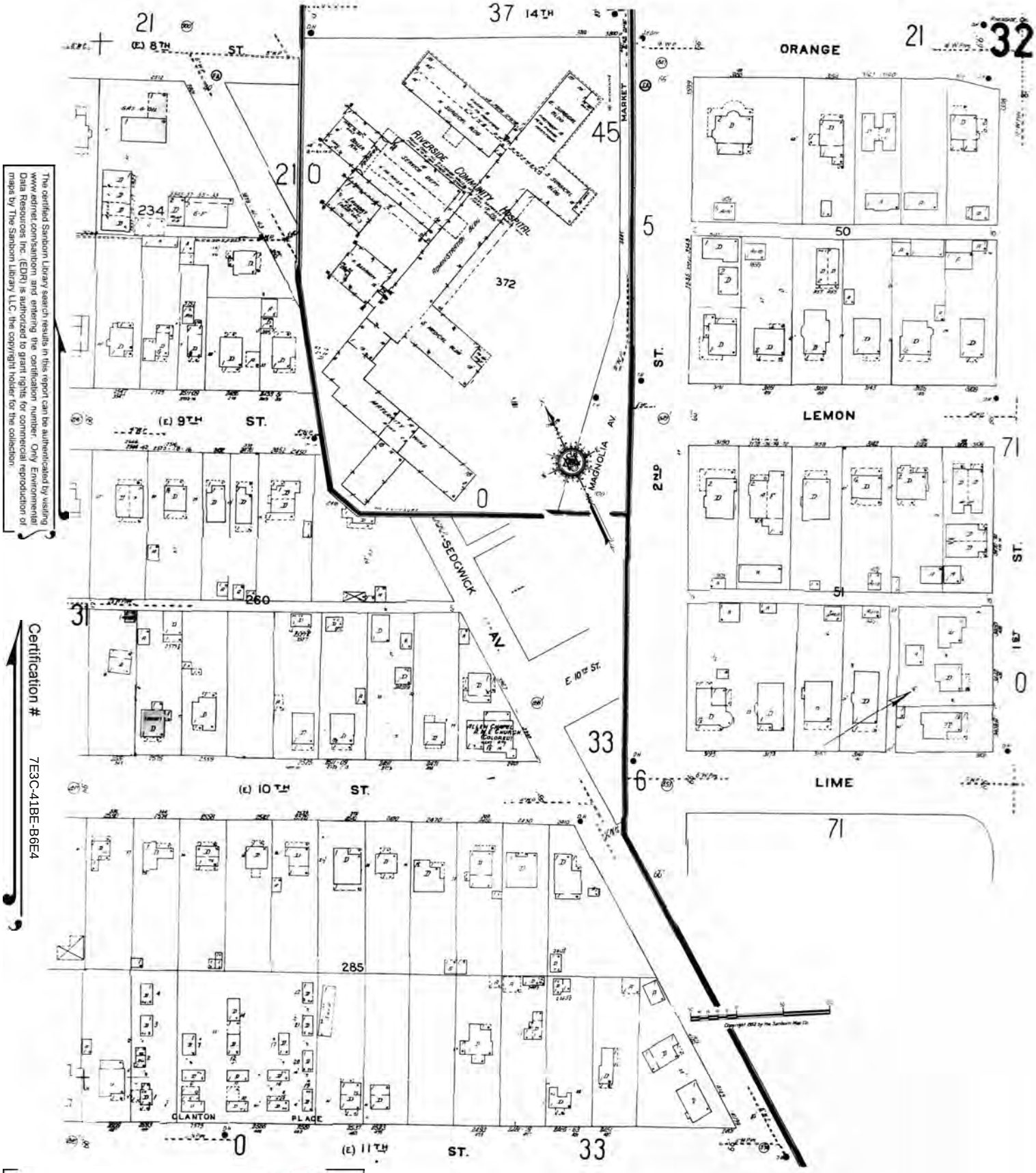
Certification #	7E3C-41BE-B6E4
Copyright:	1955

1954 Certified Sanborn Map



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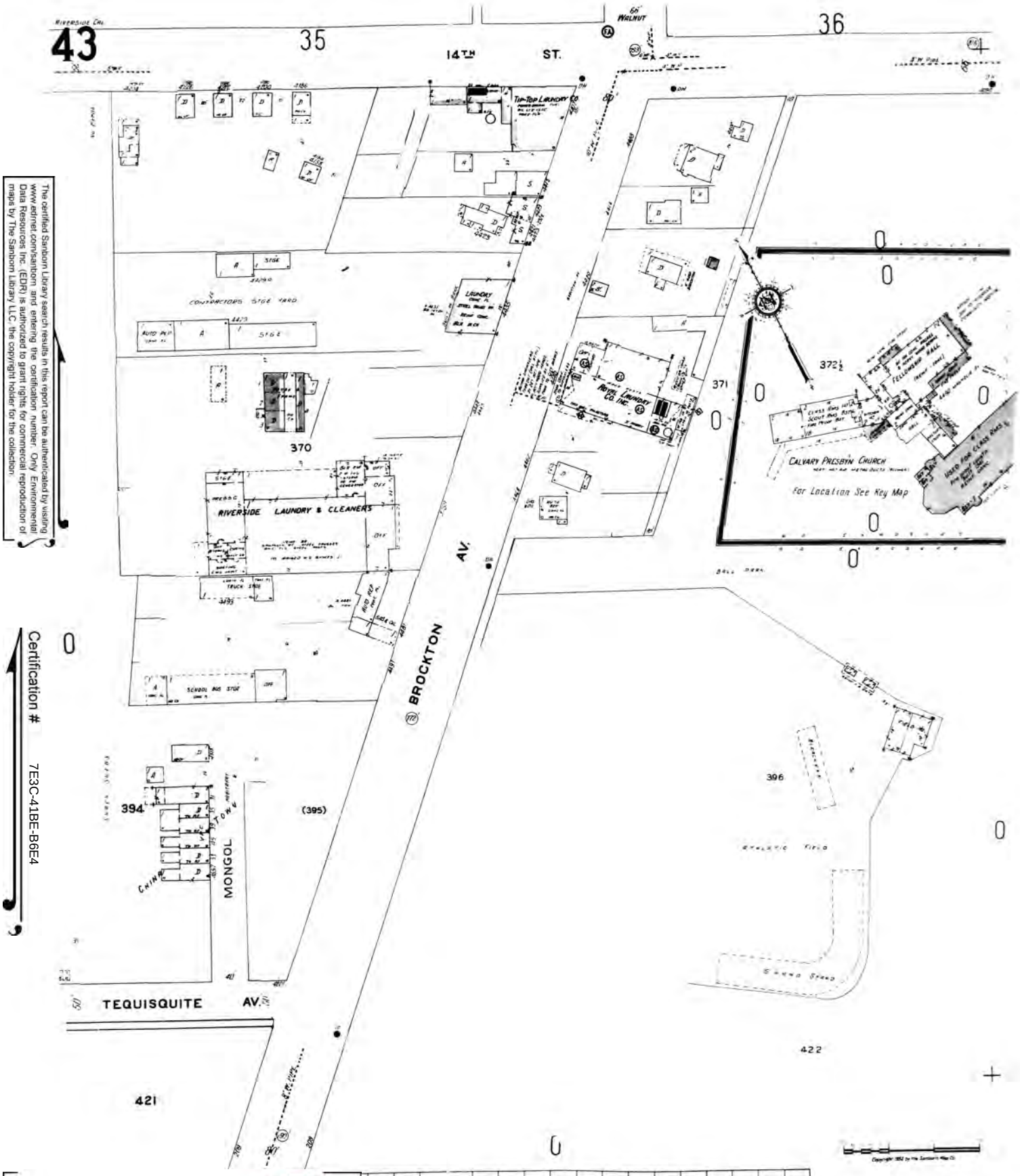
Order Date:	5/9/2013 2:51:05 PM
Certification #	7E3C-41BE-B6E4
Copyright:	1954

1954 Certified Sanborn Map



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Copyright:	1954

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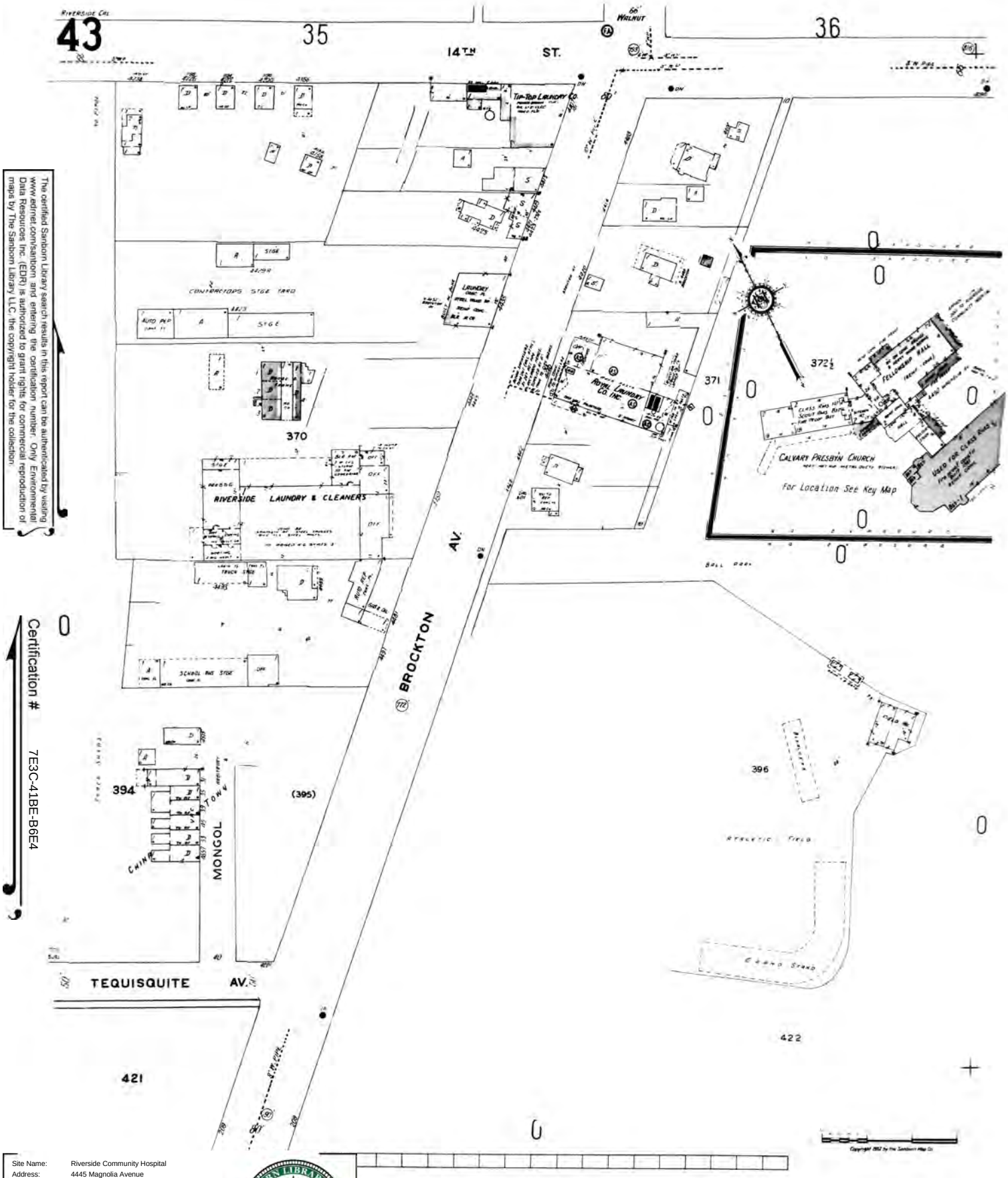
Order Date:	5/9/2013 2:51:05 PM
Certification #	7E3C-41BE-B6E4

Copyright: 1953

1953 Certified Sanborn Map



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Copyright:	1953

1952 Certified Sanborn Map

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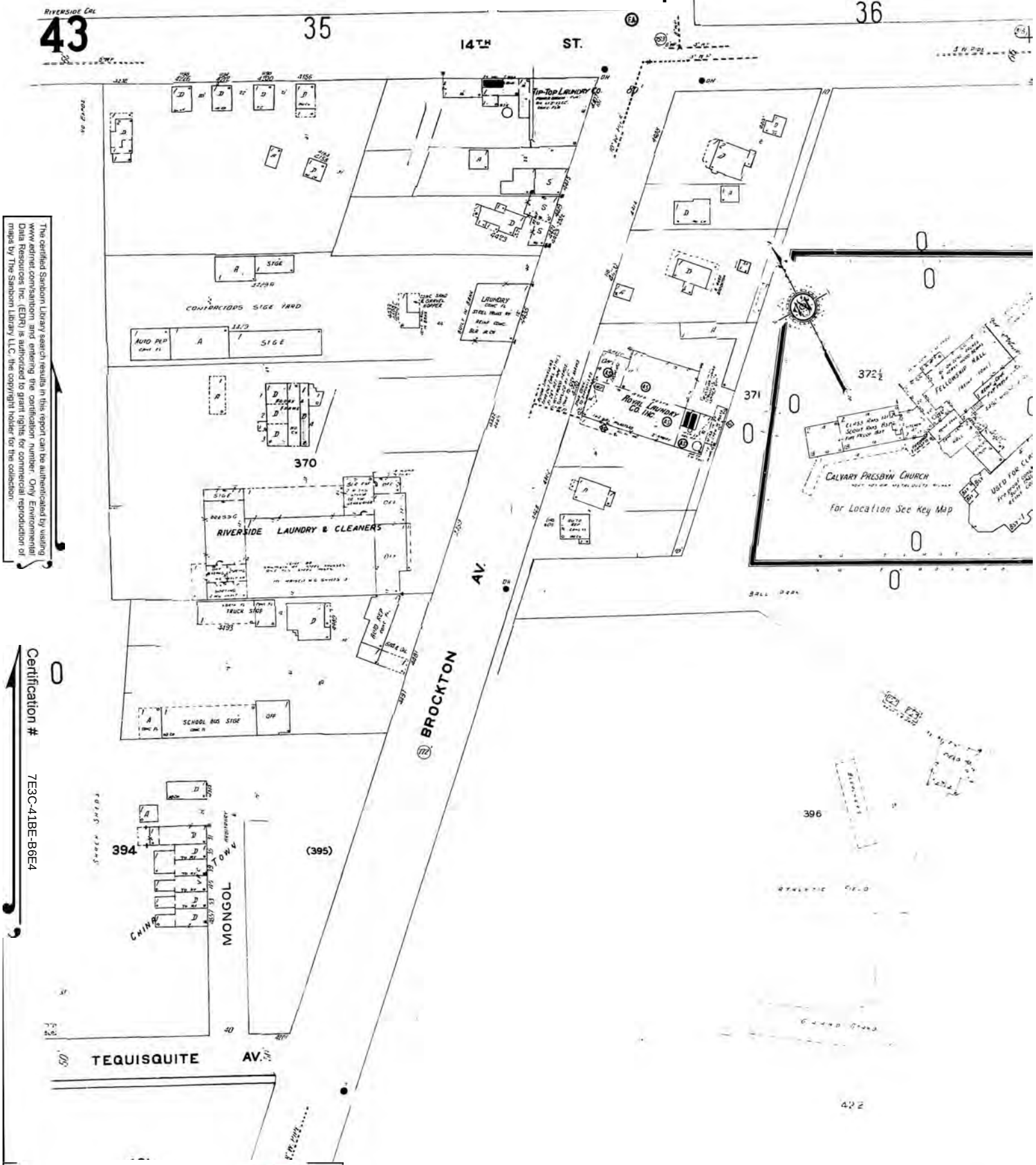
Certification #	7E3C-41BE-B6E4

Copyright: 1952

1952 Certified Sanborn Map



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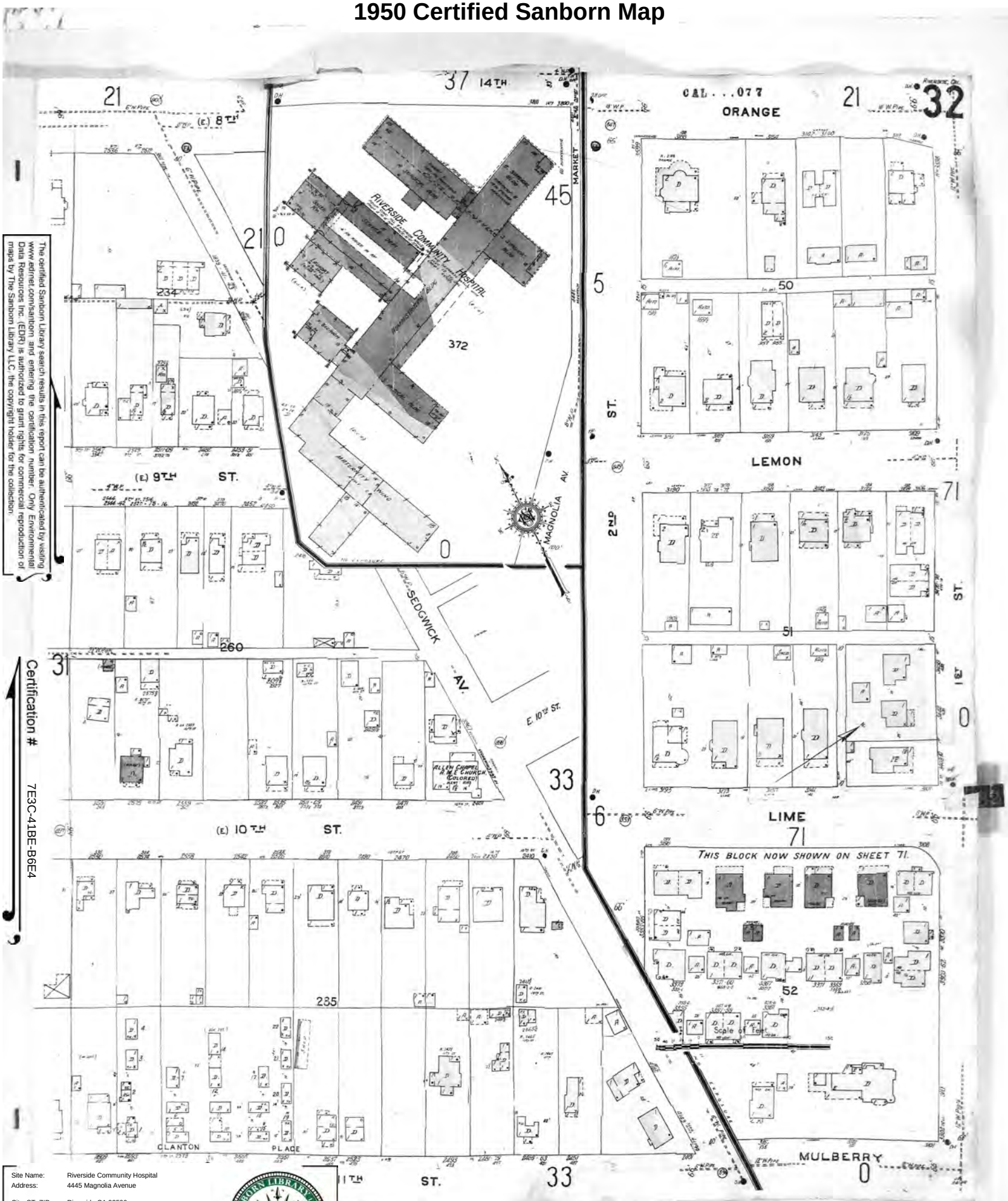
Copyright:	1952

1950 Certified Sanborn Map



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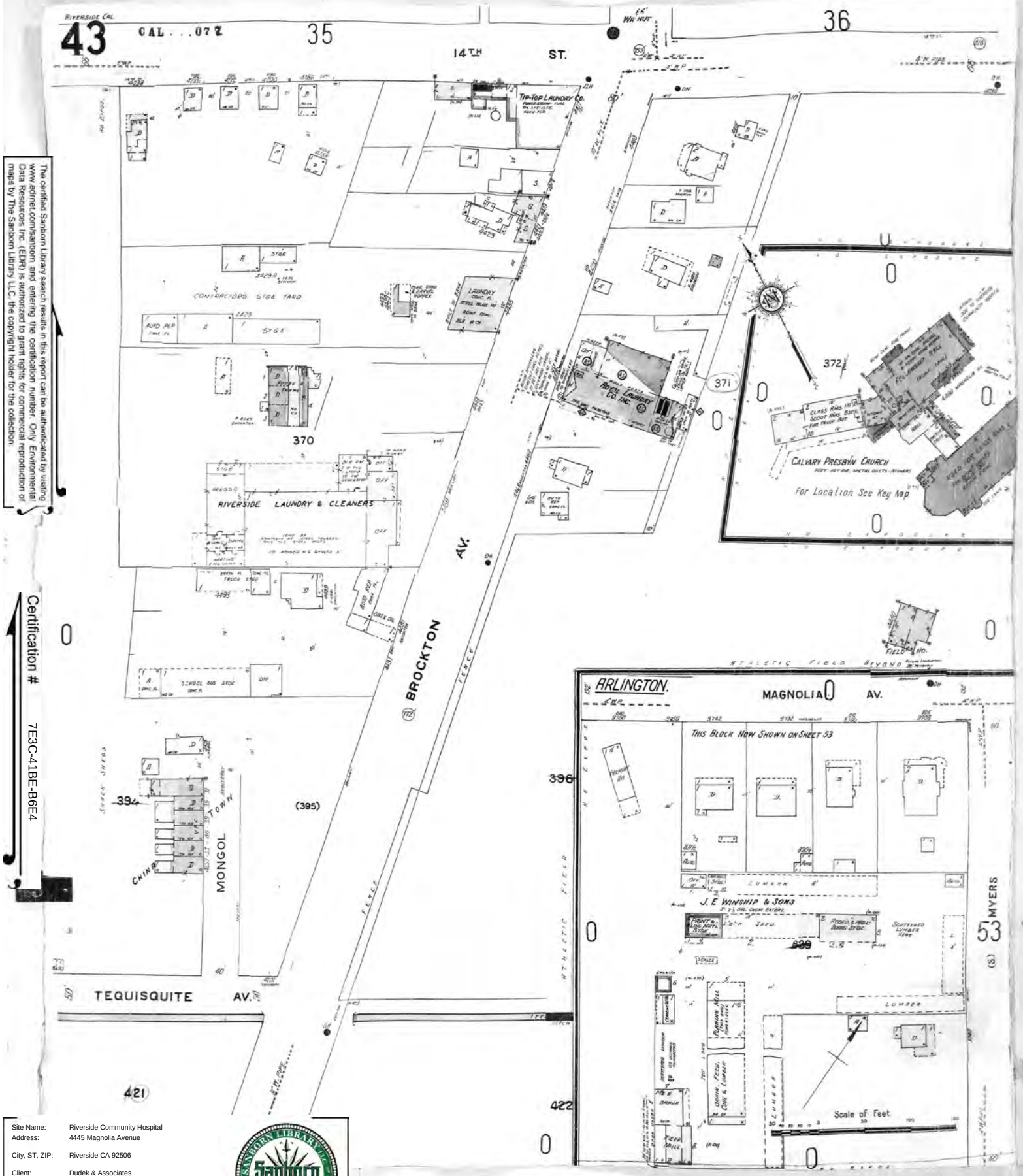
Copyright: 1950

1950 Certified Sanborn Map



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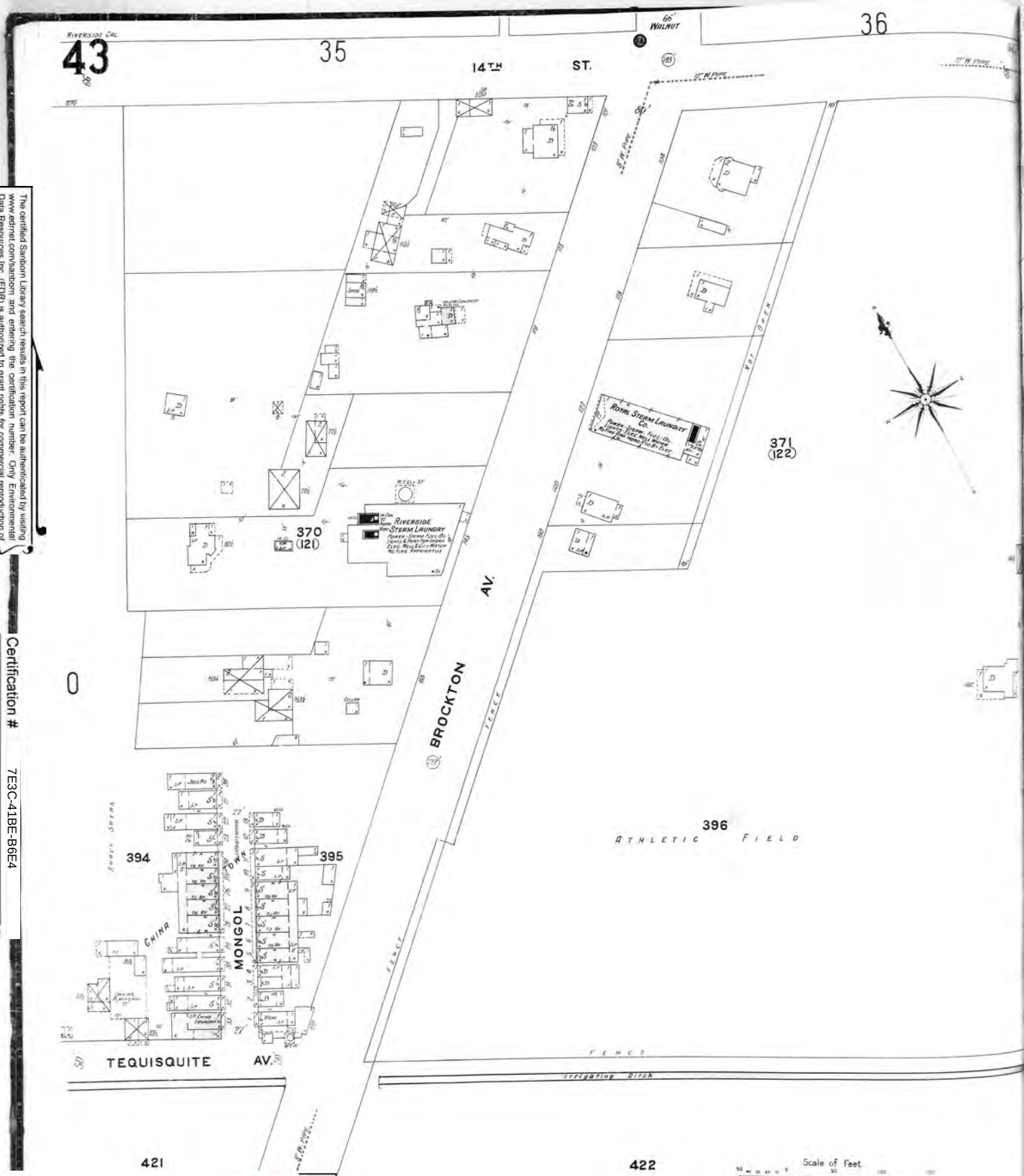
Copyright:	1950

1908 Certified Sanborn Map



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Certification #	7E3C-41BE-B6E4

Copyright: 1908

Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92506

Inquiry Number: 3602238.6
May 10, 2013

The EDR-City Directory Abstract

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1921 through 2012. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2012	Cole Information Services	X	X	X	-
2007	Cole Information Services	X	X	X	-
2002	SBC PACIFIC BELL	X	X	X	-
2001	Haines & Company, Inc.	X	X	X	-
1996	Pacific Bell	X	X	X	-
1993	Pacific Bell	X	X	X	-
1990	Pacific Bell	X	X	X	-
1986	Pacific Bell Yellow Pages	X	X	X	-
1981	Pacific Telephone	X	X	X	-
1977	Pacific Telephone	X	X	X	-
1970	Pacific Telephone	X	X	X	-
1967	Luskey Brothers & Co.	-	-	-	-
1966	Luskey Brothers & Company Inc.	X	X	X	-
1961	Luskey Brothers & Co.	-	-	-	-
1960	Luskeys Brothers & Co., Publishers	X	X	X	-
1956	Luskey Brothers & Co.	-	-	-	-
1955	Luskeys Brothers & Co., Publishers	X	X	X	-
1951	Los Angeles Directory Co.	X	X	X	-
1946	Southern California Telephone Company	X	X	X	-
1945	Los Angeles Directory Co.	X	X	X	-
1941	Pacific Directory Co.	-	-	-	-
1939	Los Angeles Directory Co.	X	X	X	-
1936	Los Angeles Directory Co.	-	X	X	-
	Los Angeles Directory Co.	X	X	X	-
1931	Southern California Telephone Co.	-	-	-	-
1930	Los Angeles Directory Co.	X	X	X	-

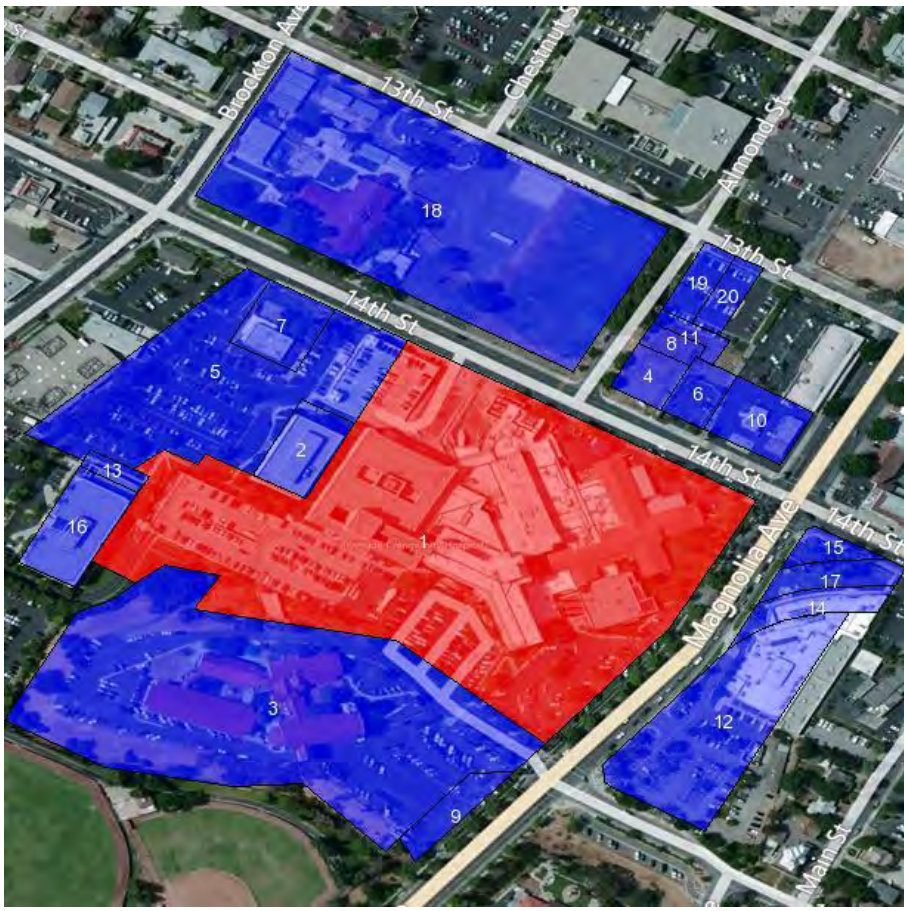
EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1927	Los Angeles Directory Co.	-	-	-	-
1925	Los Angeles Directory Co.	-	-	-	-
1924	Kaasen Directory Co.	-	-	-	-
1921	Riverside Directory Co.	-	-	-	-

EXECUTIVE SUMMARY

MAP INFORMATION

The Overview Map provides information on nearby property parcel boundaries. Properties on this map that were selected for research are listed below the map.



SELECTED ADDRESSES

The following addresses were selected by the client. Detailed findings are contained in the findings section. An "X" indicates where information was identified.

Address	***Type***	***Findings***
4445 Magnolia Avenue	Map ID: 1	X
4500 BROCKTON AVE	Map ID: 13	X
4500 BROCKTON AVE	Map ID: 16	
4000 14TH ST	Map ID: 2	X
4500 BROCKTON AVE	Map ID: 5	X
4026 14TH ST	Map ID: 7	X

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

4445 Magnolia Avenue
Riverside, CA 92506

FINDINGS DETAIL

Target Property research detail.

14TH ST

4000 14TH ST

Year	*Uses*	*Source*
2012	AGCAOILI JACQUELINE MD	Cole Information Services
	ALBRIGHT EUGENE MD	Cole Information Services
	ARTHRITIS CENTER OF RIVERSIDE	Cole Information Services
	ASHLEY TANG	Cole Information Services
	BISWAS SHANKHA MD	Cole Information Services
	CARDIOLOGY SPECIALISTS MEDICAL GROUP	Cole Information Services
	COMMUNITY PROFESSIONAL PHARMACY	Cole Information Services
	COMPUTERIZED DIAGNOSTIC IMAGING CENT	Cole Information Services
	DONALD M BLACKMAN MD	Cole Information Services
	DOUGLAS CLIFFORD C	Cole Information Services
	FRANCO AL ROBERT MD	Cole Information Services
	HASSANEIN TAREK I MD	Cole Information Services
	HERB S BRAR MD	Cole Information Services
	IBRAHIM WASEEM MD	Cole Information Services
	INLAND EMPIRE WOMENS HEALTHCARE	Cole Information Services
	INLAND RETINA CONSULTANTS MEDICAL GR	Cole Information Services
	KIM OK S MD FACOG	Cole Information Services
	MANGALA SHAKER MD	Cole Information Services
	MANINDER S ARORA	Cole Information Services
	MARILAO HILARIO	Cole Information Services
	MARVIN STEPHEN S	Cole Information Services
	RAVI T MD	Cole Information Services
	RIVERSIDE COMMUNITY HOSPITAL	Cole Information Services
	RIVERSIDE NEUROSURGICAL MD	Cole Information Services
	RONALD LO MD INC	Cole Information Services

FINDINGS

Year	Uses	Source
2012	SAI CHUNDU MD	Cole Information Services
	SOUTHERN CALIFORNIA TRANSPLANTATION	Cole Information Services
	WAHLSTROM ERIK H MD	Cole Information Services
2007	AGCAOILI JACQUELINE MD	Cole Information Services
	ARTHRITIS MEDICAL CLINIC	Cole Information Services
	ASHLEY TANG MD	Cole Information Services
	ASPEN MEDICAL GROUP INC	Cole Information Services
	BENJAMIN CHUNG MD	Cole Information Services
	CHAN CLEMENT K MD FACS	Cole Information Services
	CLARK LAWRENCE E MD	Cole Information Services
	COMMUNITY PROFESSIONAL PHARMACY	Cole Information Services
	COMPUTERIZED DIAGNOSTIC IMAGING CENT	Cole Information Services
	DONALD M BLACKMAN MD	Cole Information Services
	DR GISELLA SANDY MD	Cole Information Services
	EMERUWA IHEANACHO MD	Cole Information Services
	ENGLAND RETINA CONSULTANT	Cole Information Services
	FRANCO AL ROBERT MD	Cole Information Services
	GALEN C HUANG MD INC	Cole Information Services
	H S BRAR & B P BRAR MD INC	Cole Information Services
	LIEU RUPP MD FAMILY PRACTICE	Cole Information Services
	MANGALA C SHAKER	Cole Information Services
	MICHAEL S RILEY MD	Cole Information Services
	RAVI THIRUVENGADAM MD	Cole Information Services
	RIVERSIDE COMMUNITY HOSP TRANSPLANT	Cole Information Services
	RIVERSIDE IMAGING	Cole Information Services
	RIVERSIDE LIVER CANCER CENTER	Cole Information Services
	RIVERSIDE NEUROSURGICAL ASSOCIATES	Cole Information Services
	RIVERSIDE RADIOLOGY MEDICAL GROUP	Cole Information Services
	RNA	Cole Information Services
	STAFFORD FREDERICK L MD INC	Cole Information Services
	STEPHEN S MARVIN MD	Cole Information Services
	VINOD MISHRA MD	Cole Information Services
	WASEEM N IBRAHIM MD INC	Cole Information Services
2002	14TH CONT D	SBC PACIFIC BELL
	AGCAPILI JACQUELINE MD	SBC PACIFIC BELL
	ALBRIGHT EUGENE JR MD	SBC PACIFIC BELL

FINDINGS

Year	Uses	Source
2002	ARTHRITIS CENTER OF	SBC PACIFIC BELL
	ASHLEY TANG MD	SBC PACIFIC BELL
	BAXTER JERRY RMD	SBC PACIFIC BELL
	BLACKMAN DONALD M MD	SBC PACIFIC BELL
	BRAR HERB S DR	SBC PACIFIC BELL
	CENTER	SBC PACIFIC BELL
	CLARK LAWRENCE E MD	SBC PACIFIC BELL
	COMMUNITY PROFESSIONAL	SBC PACIFIC BELL
	COMPUTERIZED DIAGNOSTIC	SBC PACIFIC BELL
	Cont d	SBC PACIFIC BELL
	DIAGNOSTIC BREAST IMAGING	SBC PACIFIC BELL
	GILL INDRANI GILL MD	SBC PACIFIC BELL
	GORDON RICHARD S MD FACP	SBC PACIFIC BELL
	HEALTHCARE	SBC PACIFIC BELL
	HUANGGALEN G MD	SBC PACIFIC BELL
	HUBBARD JOS G MD	SBC PACIFIC BELL
	IBRAHIM WASEEM MD	SBC PACIFIC BELL
	IMAGING CENTER	SBC PACIFIC BELL
	INLAND EMPIRE WOMEN S	SBC PACIFIC BELL
	INLAND RETINA CONSULTANTS	SBC PACIFIC BELL
	MARILAO HILAR	SBC PACIFIC BELL
	MARVIN STEPHEN S MD	SBC PACIFIC BELL
	MEDICAL GROUP INC	SBC PACIFIC BELL
	MIKHAIL MINA MD	SBC PACIFIC BELL
	MISHRA V MD FACG	SBC PACIFIC BELL
	OFFICE	SBC PACIFIC BELL
	PHARMACY	SBC PACIFIC BELL
	RAVI T MD	SBC PACIFIC BELL
	RILEY MICHAEL S MD	SBC PACIFIC BELL
	RIVERSIDE	SBC PACIFIC BELL
	ROGERS ANCEL J MD	SBC PACIFIC BELL
	RUPP LIEU MD	SBC PACIFIC BELL
	SHAKER MANGALA C	SBC PACIFIC BELL
	SOUTHERN CALIFORNIA	SBC PACIFIC BELL
	THOROGOR MED ENTERPRISE	SBC PACIFIC BELL
	TRANSPLANTATION	SBC PACIFIC BELL
	UNILAB CORP	SBC PACIFIC BELL
1996	BLACKMAN DONALD M MD FACP	Pacific Bell

FINDINGS

Year	Uses	Source
1996	CARCAMO MARIO	Pacific Bell
	CLARK LAWRENCE E MD	Pacific Bell
	COMMUNITY PROFESSIONAL PHARMACY	Pacific Bell
	COMPUTERIZED DIAGNOSTIC IMAGING CENTER	Pacific Bell
	DIAGNOSTIC BREAST IMAGING CENTER	Pacific Bell
	FEINBERG GARY M MD FACS INC	Pacific Bell
	FRANCO AL ROBERT MD	Pacific Bell
	GILLIS BRUCE S MD MPH INC	Pacific Bell
	GORDON RICHARD S MD FACP	Pacific Bell
	HUBBARD JOS G MD	Pacific Bell
	IBRAHIM WASEEM MD	Pacific Bell
	INLAND EMPIRE WOMENS HEALTHCARE	Pacific Bell
	INLAND RETINA CONSULTANTS MEDICAL GROUP INC	Pacific Bell
	JOHNSON TRUMAN MD INC	Pacific Bell
	KHALID SHAHPER MD	Pacific Bell
	LONG JACQUELINE MD	Pacific Bell
	LYONS JOHN M MD	Pacific Bell
	MARILAO HILARIO	Pacific Bell
	MISHRA V MD FACG	Pacific Bell
	MULLEN JAMES H MD	Pacific Bell
	NURICK HARVEY MD	Pacific Bell
	PFEIFER JOHN S MD	Pacific Bell
	RAVI T MD	Pacific Bell
	RILEY MICHAEL S MD	Pacific Bell
	RIVERSIDE ONCOLOGY MEDICAL GROUP INC	Pacific Bell
	SHAKER MANGALA C	Pacific Bell
	SPAUR CRAIG R	Pacific Bell
	SUTHERLAND PAUL W MD	Pacific Bell
	TOURTELLOTTE CHARLES R MD	Pacific Bell
	UNILAB	Pacific Bell
	WARD JOHN ALAN MD	Pacific Bell
1993	Arthritis Center Of Riverside Medical Corporation	Pacific Bell
	Computerized Diagnostic Imaging Center	Pacific Bell
	Franco Al Robert MD	Pacific Bell
	LEVIN GARY MMD INC	Pacific Bell
	Levinson Steven	Pacific Bell

FINDINGS

Year	Uses	Source
1993	Levis Landscaping Inc	Pacific Bell
	Levisee Steven	Pacific Bell
	Ophthalmology Medical Group	Pacific Bell
1986	Allavie John MD	Pacific Bell Yellow Pages
	Allavie MDs Inc	Pacific Bell Yellow Pages
	Barton David R MD	Pacific Bell Yellow Pages
	BLACKMAN DON ALD M MD FACP	Pacific Bell Yellow Pages
	Canyon Laboratories Inc	Pacific Bell Yellow Pages
	Capsavage John MD Inc	Pacific Bell Yellow Pages
	Clemens Barton E MD	Pacific Bell Yellow Pages
	COMMUN ITY PROFE S S ION AL PHARMACY	Pacific Bell Yellow Pages
	Cooper Jas H MD	Pacific Bell Yellow Pages
	Cooper Jas L	Pacific Bell Yellow Pages
	DAVIS THOMAS L III MD IN C	Pacific Bell Yellow Pages
	Davis Thomas L MD	Pacific Bell Yellow Pages
	Davis Tim & Jo An	Pacific Bell Yellow Pages
	Davis Timothy J	Pacific Bell Yellow Pages
	Day & Night Call	Pacific Bell Yellow Pages
	GLE N W OOD ME DICAL GROUP IN C	Pacific Bell Yellow Pages
	GRE GORY JACK A MD FACP	Pacific Bell Yellow Pages
	I Marvin Stephen S MD	Pacific Bell Yellow Pages
	Inland Empire Vascular Diagnostic Center	Pacific Bell Yellow Pages
	Inland Retina Consultants Medical Group Inc	Pacific Bell Yellow Pages
	JACKS ON HAROLD W DO	Pacific Bell Yellow Pages
	Kircher Rob W MD	Pacific Bell Yellow Pages
	LE VIN GARY M MD IN C	Pacific Bell Yellow Pages
	Lee Joseph J C MD Inc	Pacific Bell Yellow Pages
	Lee Joyce	Pacific Bell Yellow Pages
	Mantz Kathryn Ph D	Pacific Bell Yellow Pages
	MDs Inc	Pacific Bell Yellow Pages
	MILLE R MULLE N & ALLAVIE M DS IN C	Pacific Bell Yellow Pages
	MIS HRAVMD facg	Pacific Bell Yellow Pages
	Miske E J	Pacific Bell Yellow Pages
	Moore David MD obstetrcs & gyneclgst	Pacific Bell Yellow Pages
	MOORE W ILLIAM DAVID MD obstetrcs & gyneclgst	Pacific Bell Yellow Pages
	Moore Wm G	Pacific Bell Yellow Pages
	MULLE N JAS H MD	Pacific Bell Yellow Pages

FINDINGS

Year	Uses	Source
1986	N E LS ON J BURDE TTE JR MD	Pacific Bell Yellow Pages
	PFE IFE R JOHN S MD	Pacific Bell Yellow Pages
	Putnoky Gilbert J MD	Pacific Bell Yellow Pages
	RICHARDS ON RAYMON D G MD IN C	Pacific Bell Yellow Pages
	RILE Y MICHAE L S MD	Pacific Bell Yellow Pages
	Riley Paul M MD	Pacific Bell Yellow Pages
	Riverside @San Bernardino@ Hemodialysis Unit	Pacific Bell Yellow Pages
	Riverside Savings See Great American First Savings Bank No Charge To Calling Party	Pacific Bell Yellow Pages
	S IN DMACK GRE GORY K MD	Pacific Bell Yellow Pages
	S UPE RIOR OPTICAL CO Riverside Ofc	Pacific Bell Yellow Pages
	Snider J Dennis III MD	Pacific Bell Yellow Pages
	Stone V M MD	Pacific Bell Yellow Pages
	Stone Vaughn & Jackie	Pacific Bell Yellow Pages
	Surgical Group	Pacific Bell Yellow Pages
	Sutherland Paul W MD Inc	Pacific Bell Yellow Pages
	Swabb Richard J MD	Pacific Bell Yellow Pages
	Swade Janeen	Pacific Bell Yellow Pages
	Trotta Paul H MD	Pacific Bell Yellow Pages
1981	ARTHRITIS ME DICAL CLN IC	Pacific Telephone
	Barton Cathy & Kevin	Pacific Telephone
	Blackman Donald M MD Glenwood Medical Group Inc	Pacific Telephone
	Bond Alan B MD	Pacific Telephone
	Brodhead Charles L Jr MD	Pacific Telephone
	Capsavage John MD Inc	Pacific Telephone
	Cline Hubert L MD	Pacific Telephone
	Colucci Stephen R MD Glenwood Medical Group Inc	Pacific Telephone
	COMPfl RIZE D DIAGN S T&DE ME DICAL GROUP OF RIVE RS IDE	Pacific Telephone
	Cooper Jas H MD	Pacific Telephone
	Davis Thomas L III MD Inc	Pacific Telephone
	Davis Thomas L MD	Pacific Telephone
	Dhalla V Prabhv MD Community Orthopedic Medical Group Of Riverside Inc	Pacific Telephone
	Forster Nancy C LCS W	Pacific Telephone
	GLE N OODMDICLGt UPIN C	Pacific Telephone
	Glenwood Medical Group Inc	Pacific Telephone
	Gordon Richard S MD	Pacific Telephone

FINDINGS

Year	Uses	Source
1981	Haller Stefan K MD Community Orthopedic Medical Group Of Riverside Inc	Pacific Telephone
	Jackson Harold W DO	Pacific Telephone
	Lee Joseph J C MD Inc	Pacific Telephone
	Lyons John C MD Inc	Pacific Telephone
	Magi Enn MD	Pacific Telephone
	Marvin Stephen S MD	Pacific Telephone
	Miller & Mullen Inc MDs	Pacific Telephone
	Miller John R Miller & Mullen Inc MDs	Pacific Telephone
	Moore David MD obstatrcs & gyneclgst	Pacific Telephone
	MOORE W IJW AM DAVID MO obstetrcs &gyneclgst	Pacific Telephone
	Mullen Jas H MD	Pacific Telephone
	Mullen Raymond S Miller & Mullen Inc MDs	Pacific Telephone
	Nelson J Burdette Jr MD	Pacific Telephone
	Pitchford C A MD	Pacific Telephone
	Putnoky Gilbert J MD	Pacific Telephone
	Richardson Raymond G MD Inc	Pacific Telephone
	Riverside @San Bernardino@ Hemodialysis Unit	Pacific Telephone
	Riverside Psychiatric Grou	Pacific Telephone
	Sf IDE	Pacific Telephone
	Sindmack Gregory K MD	Pacific Telephone
	Smalley David E MD Community Orthopedic I Medical Group Of Riverside Inc i Smallw d D	Pacific Telephone
	Stanfield Jan U LCS W	Pacific Telephone
	Sutherland Paul W MD Inc	Pacific Telephone
	Tourtelotte Chas R MD Glenwood Medical Group Inc	Pacific Telephone
	Trotta Paul H MD	Pacific Telephone
	Wall Jerome F MD Community Orthopedic Medical Group Of Riverside Inc	Pacific Telephone
	Whipple Gladys R MD Inc	Pacific Telephone
1977	Blackman Donald M MD Glenwood Medical Group Inc	Pacific Telephone
	Business Ofc	Pacific Telephone
	Capsavage John MD Inc	Pacific Telephone
	Capsavage John MDInc	Pacific Telephone
	Colucci Stephen R MD Glenwood Medical Group Inc	Pacific Telephone
	Community Outreach	Pacific Telephone

FINDINGS

Year	Uses	Source
1977	Communlty Orthopedic Medical Group Of Riverside Inc	Pacific Telephone
	COMPUTE RIZE D ME DICAL DIAGN OS TICS OF RIVE RS IDE	Pacific Telephone
	Friedman Gerald S MD	Pacific Telephone
	GLE N W OOD ME DICAL GROUP IN C	Pacific Telephone
	Gregory Jack A MD Glenwood Medical Group Inc	Pacific Telephone
	Haller Stefan K MD Community Orthopedic Medical Group Of Riverside Inc	Pacific Telephone
	Kane John L MD	Pacific Telephone
	Marvin Stephen S MD	Pacific Telephone
	Mc Devitt John J MD	Pacific Telephone
	ME DICAL ARTS PHARMACY	Pacific Telephone
	Medical Group Of Riverside Inc	Pacific Telephone
	Mullen Jas HMD	Pacific Telephone
	Nelson J Burdltte Jr MD	Pacific Telephone
	Pitchford C A MD	Pacific Telephone
	Richardson Raymond G MD Inc	Pacific Telephone
	Riverside @San Bernardino@ Hemodialysis Unit	Pacific Telephone
	Riverside San Bernardino Hemodiailysis Unit	Pacific Telephone
	Shaw John R MD Medical Corp	Pacific Telephone
	Sutherland Paul W MD Glenwood Medical Group Inc	Pacific Telephone
	Tourtellotte Chas R MD Glenwood Medical Group Inc	Pacific Telephone
	Wall Jerome F MD Community Orthopedic Medical Group Of Riverside Inc	Pacific Telephone
1955	Evans Pk	Luskeys Brothers & Co., Publishers
1945	Evans Ball Park	Los Angeles Directory Co.
1939	Evans Ball Park	Los Angeles Directory Co.
1936	EDvans Ball Park	Los Angeles Directory Co.

BROCKTON AVE

4500 BROCKTON AVE

Year	Uses	Source
2012	ALTURJUMAN AHMAD MD	Cole Information Services
	ANDREW T HO MD FACC	Cole Information Services
	ARORA MANINDER S MD	Cole Information Services
	CHEN CHIAYU MD FACC	Cole Information Services

FINDINGS

Year	Uses	Source
2012	CHUNG BENJAMIN D MD	Cole Information Services
	COMMUNITY PAIN MANAGEMENT MEDICAL CL	Cole Information Services
	COMPASSIONATE CANCER CARE	Cole Information Services
	DUONG TRUONG MD A MEDICAL CROP	Cole Information Services
	INLAND CLINICAL RESEARCH	Cole Information Services
	INLAND EMPIRE UROLOGY MEDICAL GROUP	Cole Information Services
	MADDOX JAN P MD	Cole Information Services
	PIETRO TIMOTHY J MD	Cole Information Services
	POND MALCOLM S MD FACC	Cole Information Services
	RAI BALDEV S MD	Cole Information Services
	RETINA INSTITUTE OF CALIFORNIA	Cole Information Services
	RIVERSIDE CARDIOLOGY ASSOCIATES MEDI	Cole Information Services
	RIVERSIDE COMMUNITY HOSPITAL	Cole Information Services
	RIVERSIDE COMMUNITY HOSPITAL CANCER	Cole Information Services
	RIVERSIDE EYE EAR NOSE & THROAT INST	Cole Information Services
	SEAN ARMIN MD INC	Cole Information Services
	THAKER NIMISH MD	Cole Information Services
2007	BALDEV S RAI MD INC	Cole Information Services
	BENJAMIN D CHUNG MD	Cole Information Services
	CHEN CHIAYU MD FACC	Cole Information Services
	COMMUNITY PAIN MANGEMENT MEDICAL	Cole Information Services
	DR JOHN MICAH	Cole Information Services
	INLAND CARDIO THORACIC & ASSOCIATE	Cole Information Services
	INLAND CLINICAL RESEARCH INC	Cole Information Services
	INLAND EMPIRE UROLOGY	Cole Information Services
	JAN P MADDOX MD	Cole Information Services
	KIM OK S MD FACOG	Cole Information Services
	MAGNOLIA WOMENS CENTER	Cole Information Services
	PAULUS SANTOSO MD A PROFESSIONAL COR	Cole Information Services
	PIETRO TIMOTHY J MD	Cole Information Services
	RIVERSIDE CARDIOLOGY ASSOCIATES	Cole Information Services
	RIVERSIDE ENT INST SGY CENTER	Cole Information Services
	SOUTHERN CALIFORNIA LIVER CENTERS	Cole Information Services
2002	ASSOCIATES	SBC PACIFIC BELL
	ASSOCIATES MEDICAL	SBC PACIFIC BELL

FINDINGS

Year	Uses	Source
2002	CHEN CHIAYU MD FACC	SBC PACIFIC BELL
	CHOI WAN HEE MD	SBC PACIFIC BELL
	CLINIC INC	SBC PACIFIC BELL
	COMMUNITY PAIN	SBC PACIFIC BELL
	EVANS PARK OPTICAL	SBC PACIFIC BELL
	FEINBERG GARY M MD FACS	SBC PACIFIC BELL
	GROPEN ELISSA MD	SBC PACIFIC BELL
	GROPEN JOSEPH MD A	SBC PACIFIC BELL
	GROUP	SBC PACIFIC BELL
	GYNECOLOGIC ONCOLOGY	SBC PACIFIC BELL
	INLAND CLINICAL RESEARCH	SBC PACIFIC BELL
	KITCHELL CONTRACTORS	SBC PACIFIC BELL
	KOCH RUTH JO ANNE MD INC	SBC PACIFIC BELL
	MALKI ALAN MD	SBC PACIFIC BELL
	MANAGEMENT MEDICAL	SBC PACIFIC BELL
	MEDICAL CORP	SBC PACIFIC BELL
	MEDICAL GROUP INC	SBC PACIFIC BELL
	OFFICE	SBC PACIFIC BELL
	RAIBALDEVSMD	SBC PACIFIC BELL
	RIVERSIDE CARDIOLOGY	SBC PACIFIC BELL
	RIVERSIDE EYE EAR NOSE	SBC PACIFIC BELL
	RIVERSIDE EYE SPECIALISTS	SBC PACIFIC BELL
	SIMONS JEFFREY R MD INC	SBC PACIFIC BELL
	THROAT INSTITUTE	SBC PACIFIC BELL
	WILSON RICHARD J MD INC	SBC PACIFIC BELL
2001	ALLAVIE&GLENDRANG	Haines & Company, Inc.
	ALLAVIEJOHNMD	Haines & Company, Inc.
	ARORAMANINDERS	Haines & Company, Inc.
	ASCMEDGRP	Haines & Company, Inc.
	BEAGHLER MARC A MD	Haines & Company, Inc.
	BROWN JOHN VMD	Haines & Company, Inc.
	BUILDING	Haines & Company, Inc.
	CHE 0 CHI	Haines & Company, Inc.
	CHOIWANHEEMD	Haines & Company, Inc.
	COMPUTRZD	Haines & Company, Inc.
	DIAGNOST 1 CBREAST	Haines & Company, Inc.
	DIAGNOSTIC BREAST	Haines & Company, Inc.
	DIAGNOSTIC IMAGING	Haines & Company, Inc.

FINDINGS

Year	Uses	Source
2001	DIAGNOSTICBREAST	Haines & Company, Inc.
	EMDS MILLER JOHN RMD	Haines & Company, Inc.
	EVANS PARK OPTICAL	Haines & Company, Inc.
	FAPS INC	Haines & Company, Inc.
	FEINBERGGARYMMD	Haines & Company, Inc.
	GENESENMARKCMG	Haines & Company, Inc.
	GLENDRANGERAYR	Haines & Company, Inc.
	GROPENELISSAMD	Haines & Company, Inc.
	GROPENJOSEPHMDA	Haines & Company, Inc.
	GYNECOLOGIC	Haines & Company, Inc.
	HASSANEINTAREKI	Haines & Company, Inc.
	IMAGING CNTR	Haines & Company, Inc.
	INLAND EMPIRE URLGY	Haines & Company, Inc.
	KOCHRUTHJ	Haines & Company, Inc.
	MALKIALANMD	Haines & Company, Inc.
	MD AUDIOLOGYINST	Haines & Company, Inc.
	MED CORP	Haines & Company, Inc.
	MICHAJOHN PAUL MD	Haines & Company, Inc.
	MILLER	Haines & Company, Inc.
	MILNERFLOYDEMS	Haines & Company, Inc.
	NSE&THRT INST	Haines & Company, Inc.
	NURICK HARVEYAMD	Haines & Company, Inc.
	ONCOLOGY ASSOCS	Haines & Company, Inc.
	PIETROTIMOTHYJMD	Haines & Company, Inc.
	POND MALCOLM SMD	Haines & Company, Inc.
	RAI BALDEVS MD	Haines & Company, Inc.
	RETTENMAIERMARKA	Haines & Company, Inc.
	RIVERSD CARDIOLOGY	Haines & Company, Inc.
	RIVERSDEYE	Haines & Company, Inc.
	RIVERSDEYEEAR	Haines & Company, Inc.
	ROSENQUISTRWMD 909 M	Haines & Company, Inc.
	RUPPLIEUMD	Haines & Company, Inc.
	SHIN ANTHONY MD	Haines & Company, Inc.
	SIMONSJEFFREY 9 MD	Haines & Company, Inc.
	SLEEPDISORDERS	Haines & Company, Inc.
	SPECIALISTMED GRP	Haines & Company, Inc.
1996	AUDIOLOGY INSTITUTE OF RIVERSIDE	Pacific Bell
	BRAR HERB S MD FACOG INC	Pacific Bell

FINDINGS

Year	Uses	Source
1996	CHEN CHIAYU MD FACC	Pacific Bell
	EVANS PARK OPTICAL	Pacific Bell
	HERBER STEVE MD	Pacific Bell
	INLAND EMPIRE SPINE CENTER	Pacific Bell
	INLAND EMPIRE UROLOGY MEDICAL GROUP INC	Pacific Bell
	KAPLAN ROBERT I MD	Pacific Bell
	KOCH RUTH JO ANNE MD INC	Pacific Bell
	MILLER ALLAVIE & GLENDRANGE MDS INC	Pacific Bell
	MILNER FLOYD E MS	Pacific Bell
	PHYSICIANS CLINICAL LABORATORIES	Pacific Bell
	RAI BALDEV S MD	Pacific Bell
	RICHARDSON RAYMOND G MD	Pacific Bell
	RIVERSIDE CARDIOLOGY ASSOCIATES MEDICAL GROUP	Pacific Bell
	RIVERSIDE EYE EAR NOSE & THROAT INSTITUTE	Pacific Bell
	RUPP LIEU MD	Pacific Bell
	SIMONS JEFFREY R MD INC	Pacific Bell
	SPARKS DALE B MD INC	Pacific Bell
	WILSON RICHARD J MD INC	Pacific Bell
1993	Diagnostic Breast Imaging Center	Pacific Bell
	JOHNSON TRUMAN MDINC	Pacific Bell
	Johnson Twister	Pacific Bell
	Johnson WE	Pacific Bell
	POND MALCOLM S MD	Pacific Bell
	Riverside Cardiology Associates Medical Group	Pacific Bell
	Stottlemyer Keith D MD	Pacific Bell
	WILSON RICHARD J MD INC	Pacific Bell
	Wilson Rickola	Pacific Bell
1955	Wong Geo L H	Luskeys Brothers & Co., Publishers

MAGNOLIA AVE

4445 MAGNOLIA AVE

Year	Uses	Source
2012	FAMILY BIRTHPLACE AT RIVERSIDE COMMU	Cole Information Services

FINDINGS

Year	Uses	Source
2012	RIVERSIDE COMMUNITY HOSPITAL	Cole Information Services
2007	ACCREDITED SLEEP DISORDERS CENTER	Cole Information Services
	ALL ABOUT STAFFING INC	Cole Information Services
	ANESTHESIA MEDICAL GROUP	Cole Information Services
	CALIFORNIA EMERGENCY PHYSICIANS	Cole Information Services
	COMMUNITY HEALTH CORP	Cole Information Services
	FAMILY BRTHPLCE AT RIVERSD CMM	Cole Information Services
	GARRETT VIRGINIA E MD	Cole Information Services
	GIFT CORNER OF RIVERSIDE COMMUNITY H	Cole Information Services
	PATHOLOGY MEDICAL GROUP RIVERSIDE	Cole Information Services
	REHABILITATION SERVICES	Cole Information Services
	RIVERSIDE COMMUNITY HOSP CANCER CENT	Cole Information Services
	RIVERSIDE COMMUNITY HOSPITAL	Cole Information Services
	RIVERSIDE HEALTHCARE SYSTEM LLP	Cole Information Services
	SODEXHO INC	Cole Information Services
2002	HOSPITAL	SBC PACIFIC BELL
	RIVERSIDE COMMUNITY	SBC PACIFIC BELL
	SURGI CENTER	SBC PACIFIC BELL
2001	CENTER	Haines & Company, Inc.
	COMMUNITY SURGI	Haines & Company, Inc.
	e FAMILY BIRTHPLACE	Haines & Company, Inc.
	FAX RIVERSIDE	Haines & Company, Inc.
	GARRETTV EMD	Haines & Company, Inc.
	RIVERSD CMNTY SURGI	Haines & Company, Inc.
	RIVERSDCMNTYHOSP ACCREDITED SLEEP	Haines & Company, Inc.
	RIVRSDEHOSP	Haines & Company, Inc.
1996	RIVERSIDE COMMUNITY HOSPITAL	Pacific Bell
1993	Alcohol Substance Abuse	Pacific Bell
	Behavioral Health Resources	Pacific Bell
	Diabetes Treatment Center Riverside Community Hospital	Pacific Bell
	Emergency Service	Pacific Bell
	Estate Planning Coordinator	Pacific Bell
	Family Birthplace At Riverside Commumity Hospital	Pacific Bell

FINDINGS

Year	Uses	Source
1993	Riverside Community Hospital Emergency Services	Pacific Bell
	Riverside Community Hospital Foundation	Pacific Bell
	Riverside Community Hospital Rehab Center	Pacific Bell
	TODO	Pacific Bell
	VIP Advantage	Pacific Bell
	VIP Concrete & Pumping	Pacific Bell
1990	Community Hospital	Pacific Bell
	Riverside Community Hospital	Pacific Bell
1986	Alcoholic Treatment Unit	Pacific Bell Yellow Pages
	Business Development	Pacific Bell Yellow Pages
	Care Unit	Pacific Bell Yellow Pages
	Community Education	Pacific Bell Yellow Pages
	Coyle Thomas F MD Inc	Pacific Bell Yellow Pages
	DIABE TE S TRE ATME N T CE N TE RRIVE RS IDE COMMUN ITY HOS PITAL	Pacific Bell Yellow Pages
	Emergency Service	Pacific Bell Yellow Pages
	Eye Care Center Riverside Community	Pacific Bell Yellow Pages
	Marketing Public Relations	Pacific Bell Yellow Pages
	Material Management	Pacific Bell Yellow Pages
	Physician Referral Service	Pacific Bell Yellow Pages
	Psychiatric Treatment Unit	Pacific Bell Yellow Pages
	Riverside Community Hospital Foundation	Pacific Bell Yellow Pages
1981	Coyle Thomas F MD Inc	Pacific Telephone
	RIVE RS IDE COMMUN ITY HOS PITAL	Pacific Telephone
1977	RIVE RS IDE COMMUN ITY HOS PITAL	Pacific Telephone
	RIVERSIDE COMMUNITY HOSPITAL	Pacific Telephone
1966	CR Ernst admn JB Brown asst admnr	Luskey Brothers & Company Inc.
	Riverside Community Hospital 4445 Magnolia Av Riv	Luskey Brothers & Company Inc.
1960	Riv Comm Hosp DV 3 a	Luskeys Brothers & Co., Publishers
1955	Riverside Community Hosp OV 3 a	Luskeys Brothers & Co., Publishers
1951	Riverside Community Hospital	Los Angeles Directory Co.
1946	Community Hospital	Southern California Telephone Company
	Riverside Community Hospital	Southern California Telephone Company
	Riverside County of	Southern California Telephone Company
1945	a Riv Community Hosp	Los Angeles Directory Co.
1939	Riv Community Hosp	Los Angeles Directory Co.
1930	Riverside Community hosp	Los Angeles Directory Co.

Magnolia Avenue

4445 Magnolia Avenue

Year	Uses	Source
2002	HOSPITAL	SBC PACIFIC BELL
	RIVERSIDE COMMUNITY	SBC PACIFIC BELL
	SURGI CENTER	SBC PACIFIC BELL
2001	CENTER	Haines & Company, Inc.
	COMMUNITY SURGI	Haines & Company, Inc.
	e FAMILY BIRTHPLACE	Haines & Company, Inc.
	FAX RIVERSIDE	Haines & Company, Inc.
	GARRETTV EMD	Haines & Company, Inc.
	RIVERSD CMNTY SURGI	Haines & Company, Inc.
	RIVERSDCMNTYHOSP ACCREDITED SLEEP	Haines & Company, Inc.
	RIVRSDEHOSP	Haines & Company, Inc.
1996	RIVERSIDE COMMUNITY HOSPITAL	Pacific Bell
1993	Alcohol Substance Abuse	Pacific Bell
	Behavioral Health Resources	Pacific Bell
	Diabetes Treatment Center Riverside Community Hospital	Pacific Bell
	Emergency Service	Pacific Bell
	Estate Planning Coordinator	Pacific Bell
	Family Birthplace At Riverside Commumity Hospital	Pacific Bell
	Riverside Community Hospital Emergency Services	Pacific Bell
	Riverside Community Hospital Foundation	Pacific Bell
	Riverside Community Hospital Rehab Center	Pacific Bell
	TODO	Pacific Bell
	VIP Advantage	Pacific Bell
	VIP Concrete & Pumping	Pacific Bell
1990	Community Hospital	Pacific Bell
	Riverside Community Hospital	Pacific Bell
1986	Alcoholic Treatment Unit	Pacific Bell Yellow Pages
	Business Development	Pacific Bell Yellow Pages
	Care Unit	Pacific Bell Yellow Pages
	Community Education	Pacific Bell Yellow Pages
	Coyle Thomas F MD Inc	Pacific Bell Yellow Pages
	DIABE TE S TRE ATME N T CE N TE RRIVE RS IDE COMMUN ITY HOS PITAL	Pacific Bell Yellow Pages

FINDINGS

Year	Uses	Source
1986	Emergency Service	Pacific Bell Yellow Pages
	Eye Care Center Riverside Community	Pacific Bell Yellow Pages
	Marketing Public Relations	Pacific Bell Yellow Pages
	Material Management	Pacific Bell Yellow Pages
	Physician Referral Service	Pacific Bell Yellow Pages
	Psychiatric Treatment Unit	Pacific Bell Yellow Pages
	Riverside Community Hospital Foundation	Pacific Bell Yellow Pages
1981	Coyle Thomas F MD Inc	Pacific Telephone
	RIVE RS IDE COMMUN ITY HOS PITAL	Pacific Telephone
1977	RIVE RS IDE COMMUN ITY HOS PITAL	Pacific Telephone
	RIVERSIDE COMMUNITY HOSPITAL	Pacific Telephone
1970	COMMUNITY HOSPITAL RIVERSIDE	Pacific Telephone
	Diffenbaugh J D Inc	Pacific Telephone
	RIVERSIDE COMMUNITY HOSPITAL	Pacific Telephone
1966	CR Ernst admn JB Brown asst admnr	Luskey Brothers & Company Inc.
	Riverside Community Hospital 4445 Magnolia Av Riv	Luskey Brothers & Company Inc.
1960	Riv Comm Hosp DV 3 a	Luskeys Brothers & Co., Publishers
1955	Riverside Community Hosp OV 3 a	Luskeys Brothers & Co., Publishers
1951	Riverside Community Hospital	Los Angeles Directory Co.
1946	Community Hospital	Southern California Telephone Company
	Riverside Community Hospital	Southern California Telephone Company
	Riverside County of	Southern California Telephone Company
1945	a Riv Community Hosp	Los Angeles Directory Co.
1939	Riv Community Hosp	Los Angeles Directory Co.
1930	Riverside Community hosp	Los Angeles Directory Co.

MAGNOLIA ST

4445 MAGNOLIA ST

Year	Uses	Source
1970	COMMUNITY HOSPITAL RIVERSIDE	Pacific Telephone
	Diffenbaugh J D Inc	Pacific Telephone
	RIVERSIDE COMMUNITY HOSPITAL	Pacific Telephone

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

14TH

3775 14TH

Year	Uses	Source
2002	QUICK PICK LIQUOR	SBC PACIFIC BELL

3779 14TH

Year	Uses	Source
2002	WINDOW TINTING	SBC PACIFIC BELL
	MARKET AUTO STEREO	SBC PACIFIC BELL
	ROGER NATIONAL COMPANY	SBC PACIFIC BELL

3781 14TH

Year	Uses	Source
2002	PAGERS & MORE	SBC PACIFIC BELL

3785 14TH

Year	Uses	Source
2002	ARTISTICALLY YOURS BARBER	SBC PACIFIC BELL
	SHOP III	SBC PACIFIC BELL
	PAGERS & MORE FAX	SBC PACIFIC BELL

14TH ST

3655 14TH ST

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1990	Bear N K phy & sur	Pacific Bell
1970	Phillips Petroleum Co	Pacific Telephone
1966	Blozan Wm Realtor 3655 14th St Riv	Luskey Brothers & Company Inc.
	Hodge Robt T ofc 3655 14th St Riu	Luskey Brothers & Company Inc.
	Manpower Inc 3655 14th St Riv	Luskey Brothers & Company Inc.
	Delmar J Wilcox temporary employment service	Luskey Brothers & Company Inc.
1955	Bear Newman K phys DV 3 a	Luskeys Brothers & Co., Publishers
1951	Bear N K MD	Los Angeles Directory Co.

FINDINGS

Year	Uses	Source
1946	Bear N K phy & sur	Southern California Telephone Company
1939	Girdlestone C W phys	Los Angeles Directory Co.
	Bear N K phys	Los Angeles Directory Co.

3688 14TH ST

Year	Uses	Source
1930	Hillcrest The furn rms Caplan E P	Los Angeles Directory Co.

3698 14TH ST

Year	Uses	Source
1990	Skip Fordyce Harley Davidson Motorcycle Agcy	Pacific Bell
	Fordyce Skip Harley Davidson Motorcycle Agcy	Pacific Bell
1966	Fordyce Skip Motorcycle Center 3698 14th St Riv	Luskey Brothers & Company Inc.
1955	Fordyce Skip Harley Davidson	Luskeys Brothers & Co., Publishers
1951	Skip Fordyce Harley Davidson Motorcycle Agcy	Los Angeles Directory Co.
	Fordyce Skip Harley Davidson Motorcycle Agcy	Los Angeles Directory Co.
1946	Skip Fordyce Harley Davidson Motorcycle Agcy	Southern California Telephone Company
	Fordyce Skip Harley Davidson Motorcycle Agcy	Southern California Telephone Company
1945	AFFordyce S A motorcycles	Los Angeles Directory Co.
1939	Attarians int dec	Los Angeles Directory Co.
1936	Rozier Motor Co	Los Angeles Directory Co.
1930	Comfort Supply Co Inc can vas gds	Los Angeles Directory Co.

3704 14TH ST

Year	Uses	Source
1930	Barker F K bldg contr o	Los Angeles Directory Co.

3730 14TH ST

Year	Uses	Source
1939	Geisel John gas sta	Los Angeles Directory Co.

3752 14TH ST

Year	Uses	Source
1930	Caplan D S drugs	Los Angeles Directory Co.

FINDINGS

3769 14TH ST

Year	Uses	Source
1977	W ALTON W B E LE CTRIC IN C	Pacific Telephone
1970	Riverside Auto Detail	Pacific Telephone
1955	Reeves Repr Serv auto repr OV 3 a	Luskeys Brothers & Co., Publishers
1951	Reeves Repair Serv	Los Angeles Directory Co.

3771 14TH ST

Year	Uses	Source
1990	Miller D L Riverside Carpet Wks	Pacific Bell
	Riverside Carpet Wks	Pacific Bell
1986	Nolet Fred	Pacific Bell Yellow Pages
1981	Clark Chas auto repr	Pacific Telephone
1977	Clark Chas auto repr	Pacific Telephone
1946	Miller D L Riverside Carpet Wks	Southern California Telephone Company
	Riverside Carpet Wks	Southern California Telephone Company

3775 14TH ST

Year	Uses	Source
2012	QUICK PICK	Cole Information Services
2007	ACTION PAGE & CELLULAR	Cole Information Services
	QUICK PICK LIQUOR	Cole Information Services
2001	QUICK PICK LIGUOR	Haines & Company, Inc.
1990	Riverside Plating Wks	Pacific Bell
1986	Alkire Ronald R	Pacific Bell Yellow Pages
	Alkanas Florists	Pacific Bell Yellow Pages
	Alkanas AAA Florists	Pacific Bell Yellow Pages
1977	Riversides House Of Security	Pacific Telephone
1966	Los Angeles Herald Examiner Agcy 3775 14th St Riv	Luskey Brothers & Company Inc.
1955	Wortley Cabray phys V 3 a	Luskeys Brothers & Co., Publishers
1951	Wortley Cabray MD	Los Angeles Directory Co.
1946	Riverside Plating Wks	Southern California Telephone Company

3777 14TH ST

Year	Uses	Source
1990	Rowe & Rowe rl est	Pacific Bell
1946	Rowe & Rowe rl est	Southern California Telephone Company

FINDINGS

Year	Uses	Source
1945	ARowe & Rowe real est	Los Angeles Directory Co.
1939	Rathbun Motorcycle Co	Los Angeles Directory Co.
1936	Ober C B confy	Los Angeles Directory Co.
1930	Lyon Ice Cream Co	Los Angeles Directory Co.

3779 14TH ST

Year	Uses	Source
2012	MARKET AUTO STEREO & WINDOW TINTING	Cole Information Services
2007	MARKET AUTO STEREO & WINDOW TINTING	Cole Information Services
2001	14TH 92501 CONT	Haines & Company, Inc.
	T 16 NTNG	Haines & Company, Inc.
	MARKETAUTO	Haines & Company, Inc.
	STERE 08 WNDW	Haines & Company, Inc.
1996	BRAN NU UPHOLSTERY	Pacific Bell
1990	Jackson Geo S Co roofng	Pacific Bell
1986	TV Mart	Pacific Bell Yellow Pages
1970	UNITED CLEARINGS INC	Pacific Telephone
1966	United Clearings Inc 3779 14th St Riv	Luskey Brothers & Company Inc.
	Edw C Hammill manager bank messengers	Luskey Brothers & Company Inc.
1955	Watk ns Prodts V 6 a	Luskeys Brothers & Co., Publishers
1951	Jackson Geo S Co roofng	Los Angeles Directory Co.
1946	Jackson Geo S Co roofng	Southern California Telephone Company
1945	QAJackson Geo S Co roofing contr	Los Angeles Directory Co.
1936	Vacant	Los Angeles Directory Co.
1930	Elfers O K ornamental iron	Los Angeles Directory Co.

3781 14TH ST

Year	Uses	Source
2012	DANIEL CASTRO BAIL BONDS	Cole Information Services
2007	DANIEL CASTRO BAIL BONDS	Cole Information Services
2001	XXXX	Haines & Company, Inc.
1990	Ideal Print Shop	Pacific Bell
1970	Orlando John J Colonial Upholstering Shop	Pacific Telephone
	Colonial Upholstering Shop	Pacific Telephone
1966	Colonial Upholstering Shop 3781 14th St Riu	Luskey Brothers & Company Inc.
1955	Finn Freddie Dance Studio V 4 a	Luskeys Brothers & Co., Publishers
1951	Citrus Belt Typographic Serv	Los Angeles Directory Co.

FINDINGS

Year	Uses	Source
1946	Ideal Print Shop	Southern California Telephone Company
1939	Deal R O printer	Los Angeles Directory Co.
1936	Deal R 0 printer	Los Angeles Directory Co.
1930	Deal R 0 printer	Los Angeles Directory Co.

3785 14TH ST

Year	Uses	Source
2007	ARTISTICALLY YOURS BARBER SHOP III	Cole Information Services
2001	PAGERSSMORE	Haines & Company, Inc.
1996	JET PAGING	Pacific Bell
1986	MON TYS CHOICE	Pacific Bell Yellow Pages
1981	MON TE GO BAY TROPICAL FIS H	Pacific Telephone
1955	Hulberts Auto Parts OV 6 a	Luskeys Brothers & Co., Publishers
1939	Vacant	Los Angeles Directory Co.
1936	Vacant	Los Angeles Directory Co.
1930	Home Builders Service	Los Angeles Directory Co.

3787 14TH ST

Year	Uses	Source
1951	Glabs Auto Parts	Los Angeles Directory Co.

3810 14TH ST

Year	Uses	Source
1945	Vacant	Los Angeles Directory Co.
1939	County Clinic	Los Angeles Directory Co.
1936	County Climni	Los Angeles Directory Co.
1930	County Clinie	Los Angeles Directory Co.

3891 14TH ST

Year	Uses	Source
1990	Mendoza Piedad F r	Pacific Bell
1946	Mendoza Piedad F r	Southern California Telephone Company
1945	Espinosa Fernanda Mrs	Los Angeles Directory Co.
1939	Sanchez W T	Los Angeles Directory Co.
1930	Sanchez W T o	Los Angeles Directory Co.

3912 14TH ST

Year	Uses	Source
1990	Barr Josephine Mrs r	Pacific Bell

FINDINGS

Year	Uses	Source
1990	Levine Grace L r	Pacific Bell
1951	Newman Davis O r	Los Angeles Directory Co.
	Hunter A B r	Los Angeles Directory Co.
1946	Levine Grace L r	Southern California Telephone Company
	Barr Josephine Mrs r	Southern California Telephone Company
1939	Phelps C A	Los Angeles Directory Co.
	Newman D H	Los Angeles Directory Co.
1936	Newman D H o Phelps C A	Los Angeles Directory Co.
1930	Newman D 13t o Phelps C A	Los Angeles Directory Co.

3950 14TH ST

Year	Uses	Source
1990	Winger C S Air Way Vacuum Cleaner Co Sales & Serv	Pacific Bell
	Air Way Vacuum Cleaner Sales & Serv	Pacific Bell
1955	Riv Community Hosp blood bk	Luskeys Brothers & Co., Publishers
1951	Winger C S r	Los Angeles Directory Co.
1946	Winger C S Air Way Vacuum Cleaner Co Sales & Serv	Southern California Telephone Company
	Air Way Vacuum Cleaner Sales & Serv	Southern California Telephone Company
1945	a Winger C S	Los Angeles Directory Co.
1939	Winger C O	Los Angeles Directory Co.
1936	Barnard R E	Los Angeles Directory Co.

3958 14TH ST

Year	Uses	Source
1930	Girl Scouts	Los Angeles Directory Co.

3980 14TH ST

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1996	RIVERSIDE COMMUNITY SURGICENTER	Pacific Bell

4011 14TH ST

Year	Uses	Source
2012	CHILDRENS CENTER OF THE INLAND COUN	Cole Information Services
	RIVERSIDE UNIFIED SCHOOL DISTRICT	Cole Information Services
	GRANT ELEMENTARY SCHOOL	Cole Information Services

FINDINGS

Year	Uses	Source
2012	STARTING GATE EDUCATION SERVICES	Cole Information Services
2007	CAROLYN WYLIE CENTER FOR CHILDREN YO	Cole Information Services
	GRANT ELEMENTARY SCHOOL	Cole Information Services
2001	GRANT ELEMENTARY	Haines & Company, Inc.
	RIVERSOSC GRANT	Haines & Company, Inc.
	ELMSC	Haines & Company, Inc.
	RIVRSD SC GRANT ELM	Haines & Company, Inc.
	YOUTH SERVCNTR	Haines & Company, Inc.
1990	Riverside City Schools	Pacific Bell
1986	Grant Fred E	Pacific Bell Yellow Pages
	Grant Elementary School	Pacific Bell Yellow Pages
1981	Grant Elementary School	Pacific Telephone
1977	Grant Elementary School	Pacific Telephone
1970	Grant Elementary School	Pacific Telephone
1966	Mrs Jennie Ennis supvr principal	Luskey Brothers & Company Inc.
	Grant School 4011 14th St Riv	Luskey Brothers & Company Inc.
1955	Grant Sch V 3 a	Luskeys Brothers & Co., Publishers
1951	Riverside City Schools Continued	Los Angeles Directory Co.
1946	Grant School	Southern California Telephone Company
1945	Grant School	Los Angeles Directory Co.

4026 14TH ST

Year	Uses	Source
2012	RIVERSIDE COMMUNITY PLAYERS	Cole Information Services
2007	RIVERSIDE COMMUNITY PLAYERS	Cole Information Services
2002	RIVERSIDE COMMUNITY	SBC PACIFIC BELL
	PLAYERS	SBC PACIFIC BELL
2001	RIVERSD CMNTY	Haines & Company, Inc.
	PLAYERS	Haines & Company, Inc.
	RIVERSD CMNTY	Haines & Company, Inc.
	PLAYERSEXECOFC	Haines & Company, Inc.
1996	RIVERSIDE COMMUNITY PLAYERS EXECUTIVE OFFICE	Pacific Bell
	RIVERSIDE COMMUNITY PLAYERS	Pacific Bell
1986	RIVE RS IDE COMMUN ITY PLAYE RS	Pacific Bell Yellow Pages
1981	RIVE RS IDE COMMUN ITY PLAYE RS	Pacific Telephone
1977	RIVE RS IDE COMMUN ITY PLAYE RS	Pacific Telephone
1970	Riverside Community Players	Pacific Telephone

FINDINGS

Year	Uses	Source
1955	Riv Community Players V 6 a	Luskeys Brothers & Co., Publishers

15TH

3643 15TH

Year	Uses	Source
2002	Yanez Lisa	SBC PACIFIC BELL

3647 15TH

Year	Uses	Source
2002	Kraus Douglas	SBC PACIFIC BELL

3682 15TH

Year	Uses	Source
2002	APARMENTS	SBC PACIFIC BELL
	A Labanauskas C K	SBC PACIFIC BELL
	E Schramm Michael	SBC PACIFIC BELL
	G SHAWN S CUTTS	SBC PACIFIC BELL
	F Webb Robert A	SBC PACIFIC BELL

3685 15TH

Year	Uses	Source
2002	Fenwick Gene	SBC PACIFIC BELL

15TH ST

3620 15TH ST

Year	Uses	Source
2001	BROWNSandra	Haines & Company, Inc.
1990	Shiels Chas M r	Pacific Bell
1977	Fain Glen	Pacific Telephone
1970	Shiels F E	Pacific Telephone
1966	Shiels FE 3620 15th St Riv	Luskey Brothers & Company Inc.
	h retired	Luskey Brothers & Company Inc.
1955	Shiels Frances E OV 3 a	Luskeys Brothers & Co., Publishers
1951	Shiels Chas M r	Los Angeles Directory Co.
1946	Shiels Chas M r	Southern California Telephone Company
1945	a Shiels C M	Los Angeles Directory Co.
1936	Shiels C M o	Los Angeles Directory Co.
1930	Shiels C M:	Los Angeles Directory Co.

FINDINGS

3629 15TH ST

Year	Uses	Source
1939	Shiels C M	Los Angeles Directory Co.

3632 15TH ST

Year	Uses	Source
2001	PICKARDJon	Haines & Company, Inc.
1990	Hamilton Edwin R r	Pacific Bell
1986	Roof Store The	Pacific Bell Yellow Pages
1981	Gonering J	Pacific Telephone
1966	Harkness Flora A Mrs 3632 15th St Riv	Luskey Brothers & Company Inc.
1960	King LA OV 3 a	Luskeys Brothers & Co., Publishers
1955	a 44 Eirenion Court OV 3 a	Luskeys Brothers & Co., Publishers
	Watts D R OV 3 a	Luskeys Brothers & Co., Publishers
1951	Watts D Roger r	Los Angeles Directory Co.
1946	Hamilton Edwin R r	Southern California Telephone Company
1945	Eirenion Court	Los Angeles Directory Co.
1939	La Rue P R	Los Angeles Directory Co.
1936	La Rue P R o	Los Angeles Directory Co.
1930	La Rue P R	Los Angeles Directory Co.

3636 15TH ST

Year	Uses	Source
2001	ROSARIO	Haines & Company, Inc.
1990	Taylor Catharine r	Pacific Bell
1977	Hanks Richard	Pacific Telephone
1966	Lloyd David C Jeanne 3636 15th St Riv	Luskey Brothers & Company Inc.
1960	Lloyd DC OV 4 a	Luskeys Brothers & Co., Publishers
1955	Lloyd David C OV 4 a	Luskeys Brothers & Co., Publishers
1951	Lloyd David C r	Los Angeles Directory Co.
1946	Taylor Catharine r	Southern California Telephone Company
1945	Taylor C P Mrs	Los Angeles Directory Co.
1939	Reed Fredk	Los Angeles Directory Co.
1936	De Orofft N M Mrs	Los Angeles Directory Co.
1930	Reed Predk o	Los Angeles Directory Co.

3641 15TH ST

Year	Uses	Source
1970	Cline Geo W Mrs	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	lesnmrsn KR OV 6 a	Luskeys Brothers & Co., Publishers
1955	Hilverkus Gustav OV 6 a	Luskeys Brothers & Co., Publishers
1951	Hilverkus Anna B Mrs r	Los Angeles Directory Co.
1939	Covington Harriet Mrs	Los Angeles Directory Co.
1936	Vacant	Los Angeles Directory Co.
1930	D 4oore Christie	Los Angeles Directory Co.

3642 15TH ST

Year	Uses	Source
1986	Hanley T	Pacific Bell Yellow Pages
1981	Angulo Petronilo T	Pacific Telephone
1970	Polk Danitra J	Pacific Telephone
1966	Spolir Beatrice J Mrs 3642 15th St Riuo	Luskey Brothers & Company Inc.
1960	Lewis NG Mrs OV 3 a	Luskeys Brothers & Co., Publishers
1955	Holt J L Mrs OV 3 a	Luskeys Brothers & Co., Publishers
1945	TJpchurch Frances Mrs	Los Angeles Directory Co.
1939	Singer V A	Los Angeles Directory Co.
1936	Lindsay Anne	Los Angeles Directory Co.
1930	Giddings N J	Los Angeles Directory Co.

3643 15TH ST

Year	Uses	Source
1990	Ferris Anna M r	Pacific Bell
1970	Powers M B	Pacific Telephone
1960	Lindsay BM OV 3 a 3762 Proctor RM Mrs	Luskeys Brothers & Co., Publishers
1955	Proctor Addie L OV 3 a	Luskeys Brothers & Co., Publishers
1951	Proctor Addie L r	Los Angeles Directory Co.
1946	Ferris Anna M r	Southern California Telephone Company
1945	ALa Rue S E Mrs	Los Angeles Directory Co.
1939	Hills E E Mrs	Los Angeles Directory Co.
1936	Bradley H D o	Los Angeles Directory Co.
1930	Bradley H D	Los Angeles Directory Co.

3644 15TH ST

Year	Uses	Source
1990	Robinson E A r	Pacific Bell
1977	Kelley Margaret	Pacific Telephone
1966	Lorenz Bertha 3644 15th St Rivo	Luskey Brothers & Company Inc.
1960	Lorenz Bertha OV 6 a	Luskeys Brothers & Co., Publishers

FINDINGS

Year	Uses	Source
1955	Lorenz Bertha M OV 6 a	Luskeys Brothers & Co., Publishers
1951	Lorenz Bertha M r	Los Angeles Directory Co.
1946	Robinson E A r	Southern California Telephone Company
1945	Robinson E A	Los Angeles Directory Co.
1939	Snyder Louis	Los Angeles Directory Co.
1936	Shellenback P E	Los Angeles Directory Co.

3647 15TH ST

Year	Uses	Source
1990	Dace Laurence r	Pacific Bell
	Acampa Frank A Lt r	Pacific Bell
1981	Ge Sel Craig R	Pacific Telephone
1960	Brooks TL OV 4 a	Luskeys Brothers & Co., Publishers
1955	Olson Edna E OV 3 a	Luskeys Brothers & Co., Publishers
1951	Olson Edna r	Los Angeles Directory Co.
1946	Acampa Frank A Lt r	Southern California Telephone Company
	Dace Laurence r	Southern California Telephone Company
1945	La Bruyere Myrtle	Los Angeles Directory Co.
1939	Bradley H D	Los Angeles Directory Co.
1936	Wheeler J M	Los Angeles Directory Co.

3682 15TH ST

Year	Uses	Source
2001	LABANAUS	Haines & Company, Inc.
	SCHRAMM Michael	Haines & Company, Inc.
	F WEB 8 Robert A	Haines & Company, Inc.
1996	Labanauskas C K	Pacific Bell
1986	Labanauskas C K	Pacific Bell Yellow Pages
1981	Conners Bruce W	Pacific Telephone
	Mc Kay Dale J	Pacific Telephone
1977	Lewis Susie	Pacific Telephone
	Mischke Terry	Pacific Telephone
1970	Thompson Ida P	Pacific Telephone
1966	Apartments	Luskey Brothers & Company Inc.
	By Apartmenit Number	Luskey Brothers & Company Inc.
	C Vacant	Luskey Brothers & Company Inc.
	Location Not Occupied	Luskey Brothers & Company Inc.

FINDINGS

Year	Uses	Source
1966	D Vacant	Luskey Brothers & Company Inc.
	Location Not Occupied	Luskey Brothers & Company Inc.
	E Vacant	Luskey Brothers & Company Inc.
	Location Not Occupied	Luskey Brothers & Company Inc.
	F Vacant	Luskey Brothers & Company Inc.
	Location Not Occupied	Luskey Brothers & Company Inc.
1960	Gardner CL OV 6 a	Luskeys Brothers & Co., Publishers
1955	Gardner Carl L OV 6 a	Luskeys Brothers & Co., Publishers
1951	Gardner Carl L r	Los Angeles Directory Co.
1939	Fisher C S	Los Angeles Directory Co.
1936	Fisher C S o	Los Angeles Directory Co.
1930	Pisher C S	Los Angeles Directory Co.

3685 15TH ST

Year	Uses	Source
2001	FENWIC	Haines & Company, Inc.
1996	NELSON HOUSE FOUNDATION	Pacific Bell
1986	Nelson J A	Pacific Bell Yellow Pages
	Nelson IT	Pacific Bell Yellow Pages
	Nelson I R	Pacific Bell Yellow Pages
	Nelson House	Pacific Bell Yellow Pages
1981	Nelson House	Pacific Telephone
1977	Hidlebaugh John	Pacific Telephone
	Nelson House	Pacific Telephone
1970	Alcoholic Rehabilitation Nelson House	Pacific Telephone
1966	Gross Wm R Netia 3685 15th St Riv	Luskey Brothers & Company Inc.
1960	Gross WR OV 3 a	Luskeys Brothers & Co., Publishers
1955	Wavra John U OV 3 a	Luskeys Brothers & Co., Publishers
1951	Wavra John U r	Los Angeles Directory Co.
1945	Dahl Anna M	Los Angeles Directory Co.
1936	Dahl Anna M	Los Angeles Directory Co.
1930	Perry W G	Los Angeles Directory Co.

MAGNOLIA AVE

4404 MAGNOLIA AVE

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1986	FOAMY CAR W AS H	Pacific Bell Yellow Pages

FINDINGS

Year	Uses	Source
1981	FOAMY CAR W AS H	Pacific Telephone
1977	Foamy Car Wash	Pacific Telephone
1966	Foamy Car Wash 4404 Magnolia Av Riv	Luskey Brothers & Company Inc.

4410 MAGNOLIA AVE

Year	Uses	Source
1951	Master Glaze Auto Laundry	Los Angeles Directory Co.

4414 MAGNOLIA AVE

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1990	Antique Liquor Store	Pacific Bell
	Chappies Liquor Store	Pacific Bell
1981	Three Cent Copy Co	Pacific Telephone
1977	Action Printers & Stationers Copy Cat Jr	Pacific Telephone
	Copy Cat Jr Action Printers & Stationers	Pacific Telephone
1960	Sou Calif Aluminum	Luskeys Brothers & Co., Publishers
1955	Riv Community Realty OV 3 a	Luskeys Brothers & Co., Publishers
1946	Antique Liquor Store	Southern California Telephone Company
	Chappies Liquor Store	Southern California Telephone Company

4428 MAGNOLIA AVE

Year	Uses	Source
1990	Snyders Termite Control	Pacific Bell
	Kelleys Hal Feed & Supply	Pacific Bell
1966	Snyders Pet Store 4428 Magnolia Av Riv	Luskey Brothers & Company Inc.
1960	Snyders Termlte	Luskeys Brothers & Co., Publishers
1955	Snyders Termite	Luskeys Brothers & Co., Publishers
1951	Snyders Termite Control	Los Angeles Directory Co.
1946	Snyders Termite Control	Southern California Telephone Company
	Kelleys Hal Feed & Supply	Southern California Telephone Company
1945	a Kelley H E feed	Los Angeles Directory Co.
1939	Jackson D R gro	Los Angeles Directory Co.
1930	Brody May Mrs bakery	Los Angeles Directory Co.

FINDINGS

4436 MAGNOLIA AVE

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1990	Palmers Pharmacy	Pacific Bell
1981	W OODS FOR FLOW E RS	Pacific Telephone
1977	W OODS FOR FLOW E RS	Pacific Telephone
1966	Woods For Flowers 4436 Magnolia Av Riv	Luskey Brothers & Company Inc.
1960	Woods for Flowers DV 6 a	Luskeys Brothers & Co., Publishers
1955	Woods for Flowers OV 6 a	Luskeys Brothers & Co., Publishers
1951	Woods For Flowers	Los Angeles Directory Co.
1946	Palmers Pharmacy	Southern California Telephone Company
1945	Al Palmer W G drugs	Los Angeles Directory Co.
1939	Palmer W G drugs	Los Angeles Directory Co.
1930	Mc Colm G 0 restr	Los Angeles Directory Co.

4440 MAGNOLIA AVE

Year	Uses	Source
1981	Sonshine Music	Pacific Telephone
1966	Lolas Beauty Salon 4440 Magnolia Av Riv	Luskey Brothers & Company Inc.
1960	Lolas Bty Salon OV 4 a	Luskeys Brothers & Co., Publishers
1955	Lolas Beauty Salon OV 4 a	Luskeys Brothers & Co., Publishers
1951	Lolas Beauty Salon	Los Angeles Directory Co.
1939	Sugi C florist	Los Angeles Directory Co.

4444 MAGNOLIA AVE

Year	Uses	Source
2012	COMMUNITY URGENT CARE	Cole Information Services
	HO HAI N MD	Cole Information Services
	COMMUNITY MEDICAL GROUP OF RIVERSIDE	Cole Information Services
	WALL JEROME F MD FACS QME	Cole Information Services
	CHUN KEOLA G MD QME	Cole Information Services
	JACKSON THOMAS W MD QME	Cole Information Services
	TEAM POST OP INC	Cole Information Services
	DE ANZA SURGERY CENTER	Cole Information Services
	COMMUNITY MEDICAL GROUP OF RIVERSIDE	Cole Information Services
	HEINEN GREGORY T MD QME	Cole Information Services
	MARKER CHRIS DO	Cole Information Services
2002	COMMUNITY MEDICAL GROUP	SBC PACIFIC BELL

FINDINGS

Year	Uses	Source
2002	OF RIVERSIDE INC	SBC PACIFIC BELL
2001	JACKSON THOMAS W	Haines & Company, Inc.
	JONESBERTRANDT	Haines & Company, Inc.
	MD MADDOXJANPMD	Haines & Company, Inc.
	MALLANILDMD	Haines & Company, Inc.
	MIRICH THOMAS M 3D	Haines & Company, Inc.
	PHYSICAL	Haines & Company, Inc.
	THRPYUSPRT	Haines & Company, Inc.
	SPORT CLINICTHE 909 274 3535 B	Haines & Company, Inc.
	SMALLEY DAVID E MD	Haines & Company, Inc.
	WALLJEROME F MD	Haines & Company, Inc.
	BALUYUT MICHAEL MD	Haines & Company, Inc.
	COMMTY FAMILY CARE	Haines & Company, Inc.
	COMNTY FAMILYCARE	Haines & Company, Inc.
	COMNTY MEDICAL	Haines & Company, Inc.
	GROUP RIVERSIDE	Haines & Company, Inc.
	COMNTY PAY MNG	Haines & Company, Inc.
	MEDICAL CLINIC	Haines & Company, Inc.
	COMNTY URGENT	Haines & Company, Inc.
	DHALLAVPRABHUMD	Haines & Company, Inc.
	DING LARRY DMD AME	Haines & Company, Inc.
	DOANVIENDDO	Haines & Company, Inc.
	FAAFP	Haines & Company, Inc.
	FELIX ALLEN C MD	Haines & Company, Inc.
	FLEMING	Haines & Company, Inc.
	CHRISTOPHER H MD	Haines & Company, Inc.
	HEINEN GREGORYT	Haines & Company, Inc.
	MDAMEOME	Haines & Company, Inc.
	INDSTRLCLINIC	Haines & Company, Inc.
	RIVERSIDEADIV	Haines & Company, Inc.
1996	COMMUNITY MEDICAL GROUP OF RIVERSIDE INC	Pacific Bell
1993	COMMUNITY OCCUPATIONAL INDUSTRIAL MEDICAL GROUP INC	Pacific Bell
	COMMUNITY ORTHOPAEDIC MEDICAL GROUP OF RIVERSIDE INC	Pacific Bell
	COMMUNITY ORTHOPAEDIC THERAPY & SPORT CLINIC	Pacific Bell
	Riverside Inc	Pacific Bell

FINDINGS

Year	Uses	Source
1993	Fleming Christopher MD Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell
	FLEMING FRED J No Charge To Calling Party	Pacific Bell
	Fleming G	Pacific Bell
	Haider Thomas T MD Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell
	Haight M	Pacific Bell
	Haight M I	Pacific Bell
	Jackson Thomas W MD Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell
	Mirich Thomas M ii MD Comunity Orthopaedic Medical Group Of Riverside Inc	Pacific Bell
	Mirsky T	Pacific Bell
	Smalley David E Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell
	Wall Jerome F MD FACS Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell
	Wall Kim & Sean	Pacific Bell
1986	COMMUN ITY ORTHOPAE DIC ME DICAL GROUP OF RIVE RS IDE IN C	Pacific Bell Yellow Pages
	Community Orthopaedic Therapy	Pacific Bell Yellow Pages
	CLIN IC	Pacific Bell Yellow Pages
	DHALLA V PRABHU MD Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell Yellow Pages
	FLE MIN G CHRIS TOPHE R MD Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell Yellow Pages
	HALLE R S TE FAN K MD FACS Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell Yellow Pages
	JACKS ON THOMAS W MD Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell Yellow Pages
	Jackson Timothy	Pacific Bell Yellow Pages
	Jackson W	Pacific Bell Yellow Pages
	S MALLE Y DAVID E MD Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell Yellow Pages
	Smallwood DB	Pacific Bell Yellow Pages
	W ALL JE ROME F MD FACS Community Orthopaedic Medical Group Of Riverside Inc	Pacific Bell Yellow Pages
	Webb Arthur physcl thrpst	Pacific Bell Yellow Pages

4450 MAGNOLIA AVE

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.

FINDINGS

Year	Uses	Source
1966	B & B Drive In Restaurant 4450 Magnolia Av Riv	Luskey Brothers & Company Inc.
1960	B&B Drive In 0 V 6 a	Luskeys Brothers & Co., Publishers

4458 MAGNOLIA AVE

Year	Uses	Source
1990	Coles Corral	Pacific Bell
1955	Wattenbargers Drive In restr OV 3 a	Luskeys Brothers & Co., Publishers
1951	Wattenbarger Virgil T	Los Angeles Directory Co.
1946	Coles Corral	Southern California Telephone Company
1945	ASyford W L restr	Los Angeles Directory Co.
1939	Syford W L restr	Los Angeles Directory Co.
1930	Roberts R S Mrs restr	Los Angeles Directory Co.

4466 MAGNOLIA AVE

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1990	Paris Clnrs	Pacific Bell
1981	Vans Tennis Shoes	Pacific Telephone
1977	Vans Tennis Shoes	Pacific Telephone
1966	Paris Cleaners 4466 Magnolia Av Riv	Luskey Brothers & Company Inc.
1960	Paris Clnrs DV 3 a	Luskeys Brothers & Co., Publishers
1955	Paris Clnrs OV 3 a	Luskeys Brothers & Co., Publishers
1951	Paris Clnrs	Los Angeles Directory Co.
1946	Paris Clnrs	Southern California Telephone Company
1945	AParis Clnrs	Los Angeles Directory Co.
1939	Paris Cleaners	Los Angeles Directory Co.
1930	Young G L cldo clnr	Los Angeles Directory Co.

4468 MAGNOLIA AVE

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1977	Draperies & Ideas	Pacific Telephone

4470 MAGNOLIA AVE

Year	Uses	Source
1977	Weigel John G uphlstr	Pacific Telephone

FINDINGS

4488 MAGNOLIA AVE

Year	Uses	Source
1990	Standard Stations Inc	Pacific Bell
1960	Stone CC Chevron Serv V 6 a	Luskeys Brothers & Co., Publishers
1955	Standard Sta Inc	Luskeys Brothers & Co., Publishers
1951	Standard Stations Inc	Los Angeles Directory Co.
1946	Fourteenth & Magnolia	Southern California Telephone Company
1939	Standard Stations	Los Angeles Directory Co.
1930	Southern Gasoline Stations	Los Angeles Directory Co.

4490 MAGNOLIA AVE

Year	Uses	Source
1960	Vacant	Luskeys Brothers & Co., Publishers
1955	Vacant	Luskeys Brothers & Co., Publishers

MAGNOLIA ST

4404 MAGNOLIA ST

Year	Uses	Source
1970	Foamy Car Wash Detail Shop	Pacific Telephone
	Foamy Car Wash	Pacific Telephone

4410 MAGNOLIA ST

Year	Uses	Source
1951	Allen John W Master Glaze Auto Laundry	Los Angeles Directory Co.

4414 MAGNOLIA ST

Year	Uses	Source
1951	Cook L A rl est brkr	Los Angeles Directory Co.
	Cook L A contr	Los Angeles Directory Co.

4428 MAGNOLIA ST

Year	Uses	Source
1970	Snyders Pet Store	Pacific Telephone

4436 MAGNOLIA ST

Year	Uses	Source
1970	WOODS FOR FLOWERS	Pacific Telephone

FINDINGS

4440 MAGNOLIA ST

Year	Uses	Source
1970	Lolas Beauty Salon	Pacific Telephone

4450 MAGNOLIA ST

Year	Uses	Source
1970	B & B DRIVE IN restrnt	Pacific Telephone
	B & B Caterers	Pacific Telephone

4466 MAGNOLIA ST

Year	Uses	Source
1970	TINY TOT LAUNDRY	Pacific Telephone
	Paris Cleaners	Pacific Telephone
	Acme Tiny Tot Laundry	Pacific Telephone

MAIN

4399 MAIN

Year	Uses	Source
2002	INSTA TUNE	SBC PACIFIC BELL

4401 MAIN

Year	Uses	Source
2002	MAIN STREET CAR WASH	SBC PACIFIC BELL

4480 MAIN

Year	Uses	Source
2002	MAJESTIC 3 ENTERPRISES	SBC PACIFIC BELL
	AAA ANSWERING SERVICE	SBC PACIFIC BELL
	ENTERAINMENT	SBC PACIFIC BELL
	PARALEGAL HOUSE THE	SBC PACIFIC BELL
	PLATEAU CORPORATION	SBC PACIFIC BELL
	R & J LOGISTICS	SBC PACIFIC BELL
	RIVERSIDE OFFICE CENTER	SBC PACIFIC BELL
	WEST COAST CONSTRUCTION	SBC PACIFIC BELL
	3D MEDIA & CREATIVE	SBC PACIFIC BELL
	OFFICE	SBC PACIFIC BELL
	MECHANICS RECOVERY	SBC PACIFIC BELL
	SERVICE	SBC PACIFIC BELL
	JP SERVICES	SBC PACIFIC BELL
	RECOVERY INC	SBC PACIFIC BELL

Year	Uses	Source
2002	INLAND TIRE & TIRE	SBC PACIFIC BELL
	TURNER AGENCY	SBC PACIFIC BELL
	ICR SERVICES INC DEBRA	SBC PACIFIC BELL
	HARMEN FINANCIAL	SBC PACIFIC BELL
	INTERNATIONAL	SBC PACIFIC BELL
	GOLDEN PACIFIC	SBC PACIFIC BELL
	CREOLE ENTERTAINMENT	SBC PACIFIC BELL
	CARIB ENTERPRISE INC	SBC PACIFIC BELL
	APPLIED TRAINING CENTER	SBC PACIFIC BELL
	MUST GO PLATINUM	SBC PACIFIC BELL

4488 MAIN

Year	Uses	Source
2002	Haggherty Ashley	SBC PACIFIC BELL
	B Espinosa Edward	SBC PACIFIC BELL

4538 MAIN

Year	Uses	Source
2002	Kicker Darrell	SBC PACIFIC BELL

4543 MAIN

Year	Uses	Source
2002	Adams Claudine	SBC PACIFIC BELL

MAIN ST

4380 MAIN ST

Year	Uses	Source
1990	Maxwells Associated Serv	Pacific Bell
1966	Lanier Ted Flying A Service Sta 4380 Main Riv	Luskey Brothers & Company Inc.
1960	Moores Flying A Serv OV 3 a	Luskeys Brothers & Co., Publishers
1955	Moores Assoc Serv serv sta	Luskeys Brothers & Co., Publishers
1946	Maxwells Associated Serv	Southern California Telephone Company
1939	Brittain & Smith gas sta	Los Angeles Directory Co.
1936	Brittain & Smith serv sta	Los Angeles Directory Co.

4391 MAIN ST

Year	Uses	Source
1990	Mell & Haps Cafe	Pacific Bell

FINDINGS

Year	Uses	Source
1960	Randys Cafe OV 3 a	Luskeys Brothers & Co., Publishers
1955	Randys Cafe OV 3 a	Luskeys Brothers & Co., Publishers
1951	Randys cafe	Los Angeles Directory Co.
1946	Mell & Haps Cafe	Southern California Telephone Company
1939	Fifer J C restr	Los Angeles Directory Co.
1936	Fifer J C restr	Los Angeles Directory Co.
1930	Vacant	Los Angeles Directory Co.

4397 MAIN ST

Year	Uses	Source
1930	General Tire Co Inc	Los Angeles Directory Co.

4399 MAIN ST

Year	Uses	Source
2012	UNITED AUTO REPAIR	Cole Information Services
	UHAUL NEIGHBORHOOD DEALER	Cole Information Services
2007	INSTA TUNE	Cole Information Services
1996	INSTA TUNE	Pacific Bell
1986	IN S TA TUN E	Pacific Bell Yellow Pages
1981	IN S TA TUN E	Pacific Telephone
1977	Insta Tune	Pacific Telephone
1970	BURULL & MOORE ENCO SERVICE	Pacific Telephone
1960	A&B Shop appi repr OV 3 a	Luskeys Brothers & Co., Publishers
1955	Verns Signal Serv OV 6 a	Luskeys Brothers & Co., Publishers
1951	Signal Serv Stn	Los Angeles Directory Co.
	Townsends Serv	Los Angeles Directory Co.
1939	Smiley H L gas sta	Los Angeles Directory Co.
1936	Bader Ray auto repr	Los Angeles Directory Co.
1930	Cunnison & Pilch gas sta	Los Angeles Directory Co.

4401 MAIN ST

Year	Uses	Source
2012	MAIN STREET CAR WASH	Cole Information Services
2007	MAIN STREET CAR WASH	Cole Information Services
2001	MAIN STREET CAR	Haines & Company, Inc.
1996	MAIN STREET CAR WASH	Pacific Bell

FINDINGS

4408 MAIN ST

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.

4420 MAIN ST

Year	Uses	Source
1990	Mc Gowan Patricia r	Pacific Bell
1970	Plunkett Evelyn C	Pacific Telephone
1966	Wyman Mayme Mrs 4420 Main Riv	Luskey Brothers & Company Inc.
1960	Jewell RB	Luskeys Brothers & Co., Publishers
1955	Odden Alf	Luskeys Brothers & Co., Publishers
	a 38 Castlelane Ct O V 3 a	Luskeys Brothers & Co., Publishers
1951	Vail Sue r	Los Angeles Directory Co.
1946	Mc Gowan Patricia r	Southern California Telephone Company
1945	Fowler Court a Mc Gowan Patricia	Los Angeles Directory Co.
1939	Holt Carrie Mrs	Los Angeles Directory Co.
1936	Mack R W	Los Angeles Directory Co.
1930	Mansbacher J E	Los Angeles Directory Co.

4422 MAIN ST

Year	Uses	Source
1970	Robertson Edw M Mrs	Pacific Telephone
1966	Robertson E Mrs 4422 Main Riv	Luskey Brothers & Company Inc.
1960	Langness LF Mrs	Luskeys Brothers & Co., Publishers
1955	Langness L F Mrs	Luskeys Brothers & Co., Publishers
1945	Clark Wm	Los Angeles Directory Co.
1939	Hamilton E R	Los Angeles Directory Co.
1936	Wagoner Sami	Los Angeles Directory Co.
1930	Baker Clara Baldwin W A	Los Angeles Directory Co.

4424 MAIN ST

Year	Uses	Source
1970	Robinson W	Pacific Telephone
1966	Woodworth Margaret Mrs 4424 Main Riv	Luskey Brothers & Company Inc.
1960	De Jarnett TE	Luskeys Brothers & Co., Publishers
1955	Harden R C	Luskeys Brothers & Co., Publishers
1945	Borth Jacob	Los Angeles Directory Co.
1939	Wilson Howard	Los Angeles Directory Co.
1936	Sharp Earl	Los Angeles Directory Co.
1930	Cooper E S Mrs	Los Angeles Directory Co.

FINDINGS

4426 MAIN ST

Year	Uses	Source
1966	Poole Aida Mrs 4426 Main Riv h retired	Luskey Brothers & Company Inc.
1960	Kane MA Mrs OV 4 a	Luskeys Brothers & Co., Publishers
1955	Kolden Beverly OV 3 a	Luskeys Brothers & Co., Publishers
1951	Mc Garry Bernice r	Los Angeles Directory Co.
1939	Smith J L	Los Angeles Directory Co.
1936	Quinn Roy	Los Angeles Directory Co.
1930	Fairbanks E R Mrs	Los Angeles Directory Co.

4428 MAIN ST

Year	Uses	Source
1970	Webb Cynthia T	Pacific Telephone
	Webb Arthur L Jr	Pacific Telephone
1966	Sanderson Cathryn Mis 4428 Main Riv o	Luskey Brothers & Company Inc.
1960	Parlette HM Mrs OV 6 a	Luskeys Brothers & Co., Publishers
1955	Parlette Helen M Mrs OV 6 a	Luskeys Brothers & Co., Publishers
1951	Parlette Helen r	Los Angeles Directory Co.
1939	Fowler H H	Los Angeles Directory Co.
1936	Fowler H H	Los Angeles Directory Co.
1930	Orr Eva	Los Angeles Directory Co.

4429 MAIN ST

Year	Uses	Source
1930	Poe M B Mrs	Los Angeles Directory Co.

4430 MAIN ST

Year	Uses	Source
1990	Jones Vivienne C r	Pacific Bell
1966	Kelley Irene Mrs 4430 Main Riv h retired	Luskey Brothers & Company Inc.
1960	De Jarnett RA OV 4 a	Luskeys Brothers & Co., Publishers
1955	Mc Avoy T R OV 3 a	Luskeys Brothers & Co., Publishers
1951	Jones Vivienne C r	Los Angeles Directory Co.
1946	Jones Vivienne C r	Southern California Telephone Company
1945	AJones Jas	Los Angeles Directory Co.
1939	Ruskauff H A	Los Angeles Directory Co.
1936	Yoder L S Mrs	Los Angeles Directory Co.
1930	Fincher P S	Los Angeles Directory Co.

FINDINGS

4432 MAIN ST

Year	Uses	Source
1970	Kriebs Erie M	Pacific Telephone
1966	Kriebs Erie Mrs 4432 Main Riv	Luskey Brothers & Company Inc.
1960	Smith Alphond Mrs	Luskeys Brothers & Co., Publishers
1955	Olson Doris E	Luskeys Brothers & Co., Publishers
1951	Livingston C E r	Los Angeles Directory Co.
1945	Tuttle Ernest	Los Angeles Directory Co.
1939	Shurtz Willey Mrs	Los Angeles Directory Co.
1936	Vacant	Los Angeles Directory Co.
1930	Vacant	Los Angeles Directory Co.

4434 MAIN ST

Year	Uses	Source
1970	Thomas Linda	Pacific Telephone
1966	Paul Dorothy Mf Ars 4434 Main Riv	Luskey Brothers & Company Inc.
1960	Celeste Ronald	Luskeys Brothers & Co., Publishers
1955	W:lloughby W E	Luskeys Brothers & Co., Publishers
1945	Campbell Wm	Los Angeles Directory Co.
1939	Eck Eileen	Los Angeles Directory Co.
1936	Madison Bessie A	Los Angeles Directory Co.
1930	Graber Edna Wharton Reba G	Los Angeles Directory Co.

4435 MAIN ST

Year	Uses	Source
1960	Chamberl In WC OV 6 a	Luskeys Brothers & Co., Publishers
1955	Patterson Ralph OV 3 a	Luskeys Brothers & Co., Publishers
1951	Woodman Alice Grace r	Los Angeles Directory Co.
1945	Woodman F A	Los Angeles Directory Co.
1939	Vacant	Los Angeles Directory Co.
1936	Wood W C	Los Angeles Directory Co.

4436 MAIN ST

Year	Uses	Source
1970	Hewitt Laura	Pacific Telephone
1966	Hewitt Laura Mrs 4436 Main Riv	Luskey Brothers & Company Inc.
1960	Hewitt Laura Mrs OV 6 a	Luskeys Brothers & Co., Publishers
1955	Lowe J D OV 6 a	Luskeys Brothers & Co., Publishers
1951	Kussin Anthony r	Los Angeles Directory Co.
1945	Marsicano R F	Los Angeles Directory Co.

FINDINGS

Year	Uses	Source
1939	Adair A L	Los Angeles Directory Co.
1936	Webb Lee	Los Angeles Directory Co.

4438 MAIN ST

Year	Uses	Source
1970	Ring Flossie	Pacific Telephone
1966	Warren Beatrice Mrs 4438 Main Riv	Luskey Brothers & Company Inc.
1960	Keller Mertin	Luskeys Brothers & Co., Publishers
1955	Anderson Rchd OV 4 a	Luskeys Brothers & Co., Publishers
1945	Cox Robt	Los Angeles Directory Co.
1939	Vacant	Los Angeles Directory Co.
1936	Ruskauff H A	Los Angeles Directory Co.
1930	Vacant	Los Angeles Directory Co.

4440 MAIN ST

Year	Uses	Source
1970	Dorsey Anna M	Pacific Telephone
1966	Dorsey Ann M Mrs 4440 Main Riv	Luskey Brothers & Company Inc.
1960	Dorsey AM Mrs OV 4 a	Luskeys Brothers & Co., Publishers
1955	Dorsey Anna M Mrs OV 4 a	Luskeys Brothers & Co., Publishers
1951	Smith Sarah M r	Los Angeles Directory Co.

4442 MAIN ST

Year	Uses	Source
1966	Mair Pearl Mrs 4442 Main Riv	Luskey Brothers & Company Inc.
1960	Mair Pearl Mrs OV 3 a	Luskeys Brothers & Co., Publishers
1955	Mar Pearl Mrs	Luskeys Brothers & Co., Publishers
1951	Miller Edith L r	Los Angeles Directory Co.
1945	OHara Ned	Los Angeles Directory Co.
1939	Turner J E	Los Angeles Directory Co.
	Henderson H C Mrs	Los Angeles Directory Co.
1936	Everett Edw Owens L 0 Mrs	Los Angeles Directory Co.

4442 1/2 MAIN ST

Year	Uses	Source
1955	Miller Edith L Mrs OV 4 a	Luskeys Brothers & Co., Publishers

4444 MAIN ST

Year	Uses	Source
1990	Dimmitt Statia Mrs r	Pacific Bell

FINDINGS

Year	Uses	Source
1966	Emmerson Anna Mrs 4444 Main Riv h retired	Luskey Brothers & Company Inc.
1960	Buchanan JW Mrs OV 3 a	Luskeys Brothers & Co., Publishers
1955	Fydell Eleanor Mrs	Luskeys Brothers & Co., Publishers
1946	Dimmitt Statia Mrs r	Southern California Telephone Company
1945	Hopper Blanche Mrs	Los Angeles Directory Co.

4446 MAIN ST

Year	Uses	Source
1970	Tracy Emma	Pacific Telephone
1966	Location Not Occupied	Luskey Brothers & Company Inc.
	Vacant	Luskey Brothers & Company Inc.
1960	Fydell Elenore Mrs OV 4 a	Luskeys Brothers & Co., Publishers

4448 MAIN ST

Year	Uses	Source
1966	Emert Carrie Mrs 4448 Main Riv	Luskey Brothers & Company Inc.
1960	Shores DW	Luskeys Brothers & Co., Publishers
1955	Wannemacher Maxine Mrs OV 4 a	Luskeys Brothers & Co., Publishers
1951	Wannamacher C H r	Los Angeles Directory Co.
1945	Berger Kenneth	Los Angeles Directory Co.
1939	Mitchell C R	Los Angeles Directory Co.
1936	Christensen J	Los Angeles Directory Co.
1930	Brawner M B	Los Angeles Directory Co.

4450 MAIN ST

Year	Uses	Source
1970	Palmer C O	Pacific Telephone
1966	Ring Flossie E Mrs 4450 Main Riv	Luskey Brothers & Company Inc.
1960	Kochman Anton DV 4 a	Luskeys Brothers & Co., Publishers
1955	Kochman Anton	Luskeys Brothers & Co., Publishers
1945	Beaupre Delmar	Los Angeles Directory Co.
1939	Northgraves Isabel Mrs	Los Angeles Directory Co.
1936	Northgraves Isabel Mrs	Los Angeles Directory Co.
1930	Northgraves Isabel Mrs	Los Angeles Directory Co.

4453 MAIN ST

Year	Uses	Source
1960	Fleming FE OV 6 a	Luskeys Brothers & Co., Publishers
1955	Shoemaker H B OV 6 a	Luskeys Brothers & Co., Publishers

FINDINGS

Year	Uses	Source
1945	Gardner C L	Los Angeles Directory Co.

4454 MAIN ST

Year	Uses	Source
1990	Hilverkus Anna B Mrs r	Pacific Bell
1970	Duffy Jas P	Pacific Telephone
1966	Magee Mabel Mrs 4454 Main Riv	Luskey Brothers & Company Inc.
1960	Jones JB	Luskeys Brothers & Co., Publishers
1955	Grubb L E OV 4 a	Luskeys Brothers & Co., Publishers
1946	Hilverkus Anna B Mrs r	Southern California Telephone Company
1939	Bridges L E	Los Angeles Directory Co.

4455 MAIN ST

Year	Uses	Source
1990	Stamp A J r	Pacific Bell
1981	Gardner Carl L	Pacific Telephone
1977	Gardner Carl L	Pacific Telephone
1970	Gardner Carl L	Pacific Telephone
1966	Gardner Jane Mrs 4455 Main Riv	Luskey Brothers & Company Inc.
1960	Vacant	Luskeys Brothers & Co., Publishers
1955	Pennock J R	Luskeys Brothers & Co., Publishers
1946	Stamp A J r	Southern California Telephone Company
1945	a Stamp A J	Los Angeles Directory Co.
1939	Erickson Lucille	Los Angeles Directory Co.
1936	Routenberg 0 H	Los Angeles Directory Co.
1930	Donzell T A	Los Angeles Directory Co.

4456 MAIN ST

Year	Uses	Source
1990	West Irma E r	Pacific Bell
1966	Peterson	Luskey Brothers & Company Inc.
1960	Barrackman DJ V 4 a	Luskeys Brothers & Co., Publishers
1955	Smith J F	Luskeys Brothers & Co., Publishers
1946	West Irma E r	Southern California Telephone Company
1945	West I E Mrs	Los Angeles Directory Co.
1939	Rock W H	Los Angeles Directory Co.

FINDINGS

4458 MAIN ST

Year	Uses	Source
1990	Amendt Grace A r	Pacific Bell
1966	Ouffy Jas P Margaret 4458 Main Riv	Luskey Brothers & Company Inc.
1960	Basinger AM Mrs	Luskeys Brothers & Co., Publishers
1955	Schade Isis L	Luskeys Brothers & Co., Publishers
1951	Bimpson Edw J r	Los Angeles Directory Co.
1946	Amendt Grace A r	Southern California Telephone Company
1939	Blain A J	Los Angeles Directory Co.
1936	Lord G C	Los Angeles Directory Co.

4460 MAIN ST

Year	Uses	Source
1966	Greenwood Edmund 0 4460 Main Riv	Luskey Brothers & Company Inc.
1960	k Holcomb ES Mrs DV 4 a	Luskeys Brothers & Co., Publishers
1955	l epler Dale A V 3 a	Luskeys Brothers & Co., Publishers
1945	Harwood W R	Los Angeles Directory Co.
1939	Lowe Clarice Mrs	Los Angeles Directory Co.
1936	Vacant	Los Angeles Directory Co.
1930	Marriott J P	Los Angeles Directory Co.

4463 MAIN ST

Year	Uses	Source
2001	GALVEZS	Haines & Company, Inc.
1996	Gonzalez Luis	Pacific Bell
1981	Anders N	Pacific Telephone
1970	Healey M Isabel Mrs	Pacific Telephone
1966	Shatto David L 4463 Main Riv	Luskey Brothers & Company Inc.
1960	Shatto DL OV 6 a	Luskeys Brothers & Co., Publishers
1955	Vacant	Luskeys Brothers & Co., Publishers
1939	March Vita	Los Angeles Directory Co.
1936	March Vita	Los Angeles Directory Co.
1930	Wallace G W	Los Angeles Directory Co.

4465 MAIN ST

Year	Uses	Source
1990	Mockler Richard L r	Pacific Bell
1981	Mac Klngo Kermit R	Pacific Telephone
1977	Maclinga Kermit R	Pacific Telephone
1970	Mac Kinga Kermit R	Pacific Telephone

Year	Uses	Source
1966	Mackingas Kermit R 4465 Main Riv h	Luskey Brothers & Company Inc.
1960	Jaenike Paul OV 3 a	Luskeys Brothers & Co., Publishers
1955	Jeanke Paul OV 3 a	Luskeys Brothers & Co., Publishers
1946	Mockler Richard L r	Southern California Telephone Company
1945	a Hilverkus Gustav 0 Mitchell E D	Los Angeles Directory Co.
1939	Hilverkus Gustav	Los Angeles Directory Co.
1936	Hilverkus Gustav o	Los Angeles Directory Co.
1930	Hilverkus Gustav	Los Angeles Directory Co.

4466 MAIN ST

Year	Uses	Source
1990	Difani A r	Pacific Bell
1970	Johnston Ted	Pacific Telephone
1966	Vacant	Luskey Brothers & Company Inc.
	Location Not Occupied	Luskey Brothers & Company Inc.
1960	Wright IL Mrs OV 6 a	Luskeys Brothers & Co., Publishers
1955	Hartley L A Mrs OV 6 a	Luskeys Brothers & Co., Publishers
1951	Difani A r	Los Angeles Directory Co.
1946	Difani A r	Southern California Telephone Company
1945	ADifani A R Mrs	Los Angeles Directory Co.
1939	Difani A R Mrs	Los Angeles Directory Co.
1936	Difani A R Mrs o	Los Angeles Directory Co.
1930	Difani Alice Mrs o	Los Angeles Directory Co.

4472 MAIN ST

Year	Uses	Source
1990	Stahlman Ruth Mrs r	Pacific Bell
1966	Preciado Helen L Mrs 4472 Main Riv h 2 employee City Public Libr4472	Luskey Brothers & Company Inc.
1960	Stahlman PG OV 3 a	Luskeys Brothers & Co., Publishers
1955	Stahlman Perry G OV 3 a	Luskeys Brothers & Co., Publishers
1951	Stahlman Perry G r	Los Angeles Directory Co.
1946	Stahlman Ruth Mrs r	Southern California Telephone Company
1939	Stahlman R F Mrs	Los Angeles Directory Co.
1936	Stahlman R F Mrs	Los Angeles Directory Co.
1930	Vacant	Los Angeles Directory Co.

FINDINGS

4473 MAIN ST

Year	Uses	Source
2001	OMAGLEBYJohn	Haines & Company, Inc.
1990	Troth Ada r	Pacific Bell
1986	Troth Ada	Pacific Bell Yellow Pages
1981	Troth Ada	Pacific Telephone
1977	Troth Ada	Pacific Telephone
1970	Troth Ada	Pacific Telephone
1966	Troth Ada B Mrs 4473 Main Riv	Luskey Brothers & Company Inc.
1960	Troth Ada Mrs OV 3 a	Luskeys Brothers & Co., Publishers
1955	Troth Ada R Mrs OV 3 a	Luskeys Brothers & Co., Publishers
1951	Troth Ada r	Los Angeles Directory Co.
1946	Troth Ada r	Southern California Telephone Company
1945	ATroth Ada R Mrs	Los Angeles Directory Co.
1939	Troth F D	Los Angeles Directory Co.
1936	Hildebrand J W	Los Angeles Directory Co.
1930	Miller E P	Los Angeles Directory Co.

4480 MAIN ST

Year	Uses	Source
2012	SWANSON RICHARD ATTORNEY AT LAW	Cole Information Services
	NORMAN SANDRA B LAW OFFICES OF	Cole Information Services
2001	CA TELEVISION SET	Haines & Company, Inc.
	PRODUCTIONS FAITH FU	Haines & Company, Inc.
	PARALEGAL HOUSE	Haines & Company, Inc.
	PRINCESS HOUSE	Haines & Company, Inc.
	RIVERSO OFFICE	Haines & Company, Inc.
	CENTER	Haines & Company, Inc.
	WILLIAMS Ronnie	Haines & Company, Inc.
	SERVICE	Haines & Company, Inc.
	A A A ANSWERING	Haines & Company, Inc.
1990	Ellenburg Irene r	Pacific Bell
1977	Fisher Douglas C	Pacific Telephone
1970	Holmes Sam	Pacific Telephone
	Holmes Patricia	Pacific Telephone
	Holmes Irene Mrs	Pacific Telephone
1966	Fleming Frank Lee 4480 Main Riv hi employee Santa Fe Railroad	Luskey Brothers & Company Inc.
1960	Northington WA OV 4 a	Luskeys Brothers & Co., Publishers

FINDINGS

Year	Uses	Source
1955	Vacant	Luskeys Brothers & Co., Publishers
1946	Ellenburg Irene r	Southern California Telephone Company
1939	Robertson Cecil	Los Angeles Directory Co.
1936	Locke 0 C	Los Angeles Directory Co.
1930	Smith G B	Los Angeles Directory Co.

4481 MAIN ST

Year	Uses	Source
1990	Webb Ewell L acct	Pacific Bell
1970	Taylor James	Pacific Telephone
1966	Taylor Jas 4481 Mhiain Riv	Luskey Brothers & Company Inc.
1960	Webb TC Mrs OV 4 a	Luskeys Brothers & Co., Publishers
1955	Webb T C Mrs OV 4 a	Luskeys Brothers & Co., Publishers
1951	Webb Ewell L acct	Los Angeles Directory Co.
1946	Webb Ewell L acct	Southern California Telephone Company
1945	Webb E L	Los Angeles Directory Co.
1939	Webb Lee	Los Angeles Directory Co.
1936	Bradley C J	Los Angeles Directory Co.
1930	Bevier M E Mrs	Los Angeles Directory Co.

4482 MAIN ST

Year	Uses	Source
1990	Leroy Olga B Nurse r	Pacific Bell
1981	Tran Tinh	Pacific Telephone
1970	Leroy Olga B Nurse	Pacific Telephone
1966	Leroy Olga B Mrs 4482 Main Riv	Luskey Brothers & Company Inc.
1960	Leroy OB Mrs OV 4 a	Luskeys Brothers & Co., Publishers
1955	Leroy Olga B OV 4 a	Luskeys Brothers & Co., Publishers
1951	Leroy Olga B Nurse r	Los Angeles Directory Co.
1946	Leroy Olga B Nurse r	Southern California Telephone Company
1939	Phillips L W Mrs	Los Angeles Directory Co.
1936	Pownell M E	Los Angeles Directory Co.
1930	Harkness Wm	Los Angeles Directory Co.

4484 MAIN ST

Year	Uses	Source
2001	RICKETS	Haines & Company, Inc.
	DEWMichael	Haines & Company, Inc.

FINDINGS

Year	Uses	Source
1996	Munoz Michele	Pacific Bell
1986	Mc Cartney G	Pacific Bell Yellow Pages
1981	Pham Anh	Pacific Telephone
1970	Greve Robt A	Pacific Telephone
1966	Fairhurst Catherine Mrs 4484 Main Riv	Luskey Brothers & Company Inc.
1955	Overturf R G OV 3 a	Luskeys Brothers & Co., Publishers

4486 MAIN ST

Year	Uses	Source
1981	De Dan H	Pacific Telephone
1970	Wallace Raymond J	Pacific Telephone
	Wallace Margie	Pacific Telephone
	Ventura Dante M	Pacific Telephone
1966	Myers Ruth L Mrs 4486 Main Riv	Luskey Brothers & Company Inc.
1960	Cowan EB Jr	Luskeys Brothers & Co., Publishers
1955	Howe R G	Luskeys Brothers & Co., Publishers

4488 MAIN ST

Year	Uses	Source
1981	Tran Thieu M	Pacific Telephone
	Nguyen Tuan Anh	Pacific Telephone

4494 MAIN ST

Year	Uses	Source
1990	Palmer W G r	Pacific Bell
1986	Tran Tan M	Pacific Bell Yellow Pages
1981	Kelley Myrtle Mrs	Pacific Telephone
1977	Kelley Myrtle Mrs	Pacific Telephone
1970	Kelley Myrtle Mrs	Pacific Telephone
1966	Keiley Myrtle E Mrs 4494 Main Riv	Luskey Brothers & Company Inc.
	CONTINUED	Luskey Brothers & Company Inc.
1960	La Rue SE Mrs OV 3 a	Luskeys Brothers & Co., Publishers
1955	La Rue Sadie E Mrs	Luskeys Brothers & Co., Publishers
1951	La Rue Sadie E r	Los Angeles Directory Co.
1946	Palmer W G r	Southern California Telephone Company
1939	Palmer W G	Los Angeles Directory Co.
1936	Palmer W G	Los Angeles Directory Co.

FINDINGS

4509 MAIN ST

Year	Uses	Source
2012	OPERATION STATE HOUSE	Cole Information Services
2001	HERTZOG Gre	Haines & Company, Inc.
	SHORT Donna	Haines & Company, Inc.
1986	White Richard T	Pacific Bell Yellow Pages
	Ellefson Dolph	Pacific Bell Yellow Pages
	Ho Nghia	Pacific Bell Yellow Pages
	Hughes Michael H	Pacific Bell Yellow Pages
	Lincecum Donna	Pacific Bell Yellow Pages
	LIN COIN APARTME N TS.....	Pacific Bell Yellow Pages
	Spicer Kenneth	Pacific Bell Yellow Pages
	Spicer L	Pacific Bell Yellow Pages
	Vargas Salvador M	Pacific Bell Yellow Pages
1981	Bock Clay W	Pacific Telephone
	Labanauskas C K	Pacific Telephone
	Lukowski Tony	Pacific Telephone
	Nelson Shelby E	Pacific Telephone
1977	Beasley Duane	Pacific Telephone
	Gatson Melvin D	Pacific Telephone
	Gwinnett Paul	Pacific Telephone
	Labanauskas C K	Pacific Telephone
	Lucas P	Pacific Telephone
1970	Gebhardt Harold Dr	Pacific Telephone
	Labanauskas Chas K	Pacific Telephone
	Seabrook H	Pacific Telephone
	Taylor Jas G	Pacific Telephone
1966	Location Not Occupied	Luskey Brothers & Company Inc.
	Stevenson Pattie Mrs 4509 Main Apt 7 Riv h	Luskey Brothers & Company Inc.
	Bae Won 4509 Main Apt 6 Riv	Luskey Brothers & Company Inc.
	Boswell Ina 4509 Main Apt 5 Riv h office secretary Riv Unified S5	Luskey Brothers & Company Inc.
	Dates Martin Laurie 4509 Main Apt 4 Riv h	Luskey Brothers & Company Inc.
	Williams Ronald G 4509 Main Apt 3 Riv h	Luskey Brothers & Company Inc.
	Jones Marion Mrs 4509 Main Apt 2 Riv h	Luskey Brothers & Company Inc.
	Maple Lee Esther 4509 Main Apt 1 Riv	Luskey Brothers & Company Inc.
	By Apartment Number	Luskey Brothers & Company Inc.
	Apartments	Luskey Brothers & Company Inc.
	Vacant	Luskey Brothers & Company Inc.

FINDINGS

4536 MAIN ST

Year	Uses	Source
2001	ROBERTSTrfany L 900 7 B	Haines & Company, Inc.
1990	Kendrick L A Lt r	Pacific Bell
1981	Cole Ronald H	Pacific Telephone
1966	Min 5 Attempts Made	Luskey Brothers & Company Inc.
	No Return	Luskey Brothers & Company Inc.
1960	Williams Florence C	Luskeys Brothers & Co., Publishers
1955	Baker David	Luskeys Brothers & Co., Publishers
1946	Kendrick L A Lt r	Southern California Telephone Company
1945	AHarrell R T	Los Angeles Directory Co.
1939	Weatherly J D	Los Angeles Directory Co.
1936	Wright J A	Los Angeles Directory Co.
1930	Vacant	Los Angeles Directory Co.

4538 MAIN ST

Year	Uses	Source
1990	James Earl R r	Pacific Bell
1981	Galvin Joe	Pacific Telephone
1977	Rabito Geo	Pacific Telephone
1970	Hill Rose M	Pacific Telephone
1966	Carson Arlys Mrs 4538 Main Riv	Luskey Brothers & Company Inc.
1960	Wilson JM Mrs OV 6 a	Luskeys Brothers & Co., Publishers
1955	Burkard C	Luskeys Brothers & Co., Publishers
1946	James Earl R r	Southern California Telephone Company
1939	Carter Lloyd	Los Angeles Directory Co.
1936	Newell A M Mrs	Los Angeles Directory Co.
1930	Parks Edith Mrss	Los Angeles Directory Co.

4539 MAIN ST

Year	Uses	Source
2001	BOZONEL	Haines & Company, Inc.
	MAIN 92501 CONT	Haines & Company, Inc.
	MARTi NEZAnnando	Haines & Company, Inc.
1996	Meza Jorge M	Pacific Bell
1990	Craft Marcella r	Pacific Bell
1986	Beaven Wm F	Pacific Bell Yellow Pages
	Lu an Patricio C	Pacific Bell Yellow Pages
	Werk Michael	Pacific Bell Yellow Pages

Year	Uses	Source
1986	Werley Dean Lt Col	Pacific Bell Yellow Pages
	Werley Ralph & Susan	Pacific Bell Yellow Pages
1981	Aochi J	Pacific Telephone
1970	Davis G A	Pacific Telephone
	Halasz Ladislao	Pacific Telephone
	Halasz Maria	Pacific Telephone
	Laird Tim	Pacific Telephone
	Smith B J	Pacific Telephone
	Sorrentino L E	Pacific Telephone
1966	Halasz Ladislao Mary 4539 Main Riv h Halasz Shoe Rebuilding	Luskey Brothers & Company Inc.
	Sadislao Halas Mary 4539 Main Riv h Modern Shoe Repair	Luskey Brothers & Company Inc.
	Apartments	Luskey Brothers & Company Inc.
	By Apartment Number	Luskey Brothers & Company Inc.
	A Pirro Angelo Julia 4539 Main Apt A Riv h	Luskey Brothers & Company Inc.
	C Vacant	Luskey Brothers & Company Inc.
	Location Not Occupied	Luskey Brothers & Company Inc.
	D Tary Alex Sandy 4539 Main Apt D Riv hstudent	Luskey Brothers & Company Inc.
	E Ladislad Halasz Maria 4539 Main Apt E Riv h shoe repairman	Luskey Brothers & Company Inc.
	F Phillips Jas Florence 4539 Main Apt F Riv h	Luskey Brothers & Company Inc.
	G Ersen Edwin E Barbara 4539 Main Apt G Riv h employee Sages Mar	Luskey Brothers & Company Inc.
1960	Gurl CW	Luskeys Brothers & Co., Publishers
1955	Buckley Albt	Luskeys Brothers & Co., Publishers
1951	Craft Marcelia r	Los Angeles Directory Co.
1946	Craft Marcella r	Southern California Telephone Company

4540 MAIN ST

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1981	Allen L	Pacific Telephone
1977	Allen L	Pacific Telephone
1970	Allen Luella V	Pacific Telephone
1966	Thonsen Carolyn 4540 Main Riv	Luskey Brothers & Company Inc.
1960	Thorson Carolyn C OV 3 a	Luskeys Brothers & Co., Publishers
1955	Thorsen Carolyn C OV 3 a	Luskeys Brothers & Co., Publishers
1951	Thorsen Carolyn r	Los Angeles Directory Co.

FINDINGS

Year	Uses	Source
1945	ASeski E J	Los Angeles Directory Co.
1939	Waters Ethel	Los Angeles Directory Co.
1936	Bradley R F	Los Angeles Directory Co.
1930	Kline Josephine	Los Angeles Directory Co.

4542 MAIN ST

Year	Uses	Source
1990	Finley Margaret A r	Pacific Bell
1986	Plrch Shawn M	Pacific Bell Yellow Pages
1970	Gardner Carlton L	Pacific Telephone
1966	Min 5 Attempts Made	Luskey Brothers & Company Inc.
	No Return	Luskey Brothers & Company Inc.
1960	FInley Margt A OV 3 a	Luskeys Brothers & Co., Publishers
1955	Finley Margt A OV 3 a	Luskeys Brothers & Co., Publishers
1951	Finley Margaret A r	Los Angeles Directory Co.
1946	Finley Margaret A r	Southern California Telephone Company
1945	AFinley Margt A	Los Angeles Directory Co.
1939	Finley Margt A	Los Angeles Directory Co.
1936	Finley Margt A	Los Angeles Directory Co.
1930	Du Bose T J	Los Angeles Directory Co.

4543 MAIN ST

Year	Uses	Source
1966	Crumley Curt 4543 Main Riv	Luskey Brothers & Company Inc.
1960	Brown JE OV 4 a	Luskeys Brothers & Co., Publishers
1955	Vacant	Luskeys Brothers & Co., Publishers
1951	Waddock F B Jr r	Los Angeles Directory Co.

4545 MAIN ST

Year	Uses	Source
2001	WAKEFIELDC 00 U	Haines & Company, Inc.
1986	Camenga Garry	Pacific Bell Yellow Pages
1981	Buus Mike	Pacific Telephone
1977	Buus Mike	Pacific Telephone
1970	Buus Les	Pacific Telephone
1966	No Return	Luskey Brothers & Company Inc.
	Min 5 Attempts Made	Luskey Brothers & Company Inc.
1960	Luchs HR OV 4 a	Luskeys Brothers & Co., Publishers
1955	Vacant	Luskeys Brothers & Co., Publishers

Year	Uses	Source
1951	Hertel Edw r	Los Angeles Directory Co.

4547 MAIN ST

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1986	Krieger L	Pacific Bell Yellow Pages
1970	Weisberg Jane	Pacific Telephone
1966	Hemborg WA 4547 Main Riv	Luskey Brothers & Company Inc.
1960	Pyles GD OV 6 a	Luskeys Brothers & Co., Publishers
1955	Vacant	Luskeys Brothers & Co., Publishers
1951	Carlisle Howard B Lt r	Los Angeles Directory Co.

4561 MAIN ST

Year	Uses	Source
2001	WAKEFIELDC	Haines & Company, Inc.
1986	Pettenger Mike	Pacific Bell Yellow Pages
1977	Hyland Eugene H	Pacific Telephone
1970	Hyland Eugene H	Pacific Telephone
1966	Hyland Eug Edna 4561 Main Riv	Luskey Brothers & Company Inc.
1960	Hyland EH OV 3 a	Luskeys Brothers & Co., Publishers
1955	Daugherty J H Mrs	Luskeys Brothers & Co., Publishers
1951	Schulze Gerda F r	Los Angeles Directory Co.

4563 MAIN ST

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1986	Reinhold L	Pacific Bell Yellow Pages
1981	Roffers S E	Pacific Telephone
1970	Price Monty	Pacific Telephone
1966	Vacant	Luskey Brothers & Company Inc.
	Location Not Occupied	Luskey Brothers & Company Inc.
1960	Vacant	Luskeys Brothers & Co., Publishers
1955	Vacant	Luskeys Brothers & Co., Publishers

MARKET

4343 MARKET

Year	Uses	Source
2002	UNITED CEREBRAL PALSY	SBC PACIFIC BELL
	UNITED THRIFT STORE	SBC PACIFIC BELL

4344 MARKET

Year	Uses	Source
2002	ANTIQUE AVENUE	SBC PACIFIC BELL

4380 MARKET

Year	Uses	Source
2002	TOP DAWG AUTO REPAIR	SBC PACIFIC BELL

4398 MARKET

Year	Uses	Source
2002	DE ANZA MUFFLER SERVICE	SBC PACIFIC BELL

MARKET ST

4336 MARKET ST

Year	Uses	Source
2007	SEIU LOCAL 1997	Cole Information Services

4340 MARKET ST

Year	Uses	Source
1936	Wilson J H auto accessor ies	Los Angeles Directory Co.

4343 MARKET ST

Year	Uses	Source
2012	FELIX MEDICAL GROUP	Cole Information Services
	DHALLA ORTHOPEDIC CENTER INC	Cole Information Services
	DOAN VIEN DO	Cole Information Services
	DHALLA RAJA MD	Cole Information Services
	DHALLA ORTHOPEDIC CENTER INC THERAPY	Cole Information Services
2007	VIEN DOAN D O	Cole Information Services
	DHALLA PRABHA MRS MD	Cole Information Services
	UNITED CEREBRAL PALSY SALVAGE	Cole Information Services
2001	UNITDTHRIFTSTORE	Haines & Company, Inc.
1996	UNITED THRIFT STORE	Pacific Bell
1990	Alpha Beta Food Markets Inc	Pacific Bell
	Alpha Beta Donut & Malt Shop	Pacific Bell
1986	UN ITE D THRIFT S TORE	Pacific Bell Yellow Pages
1981	United Thrift Store	Pacific Telephone
1977	Juliens Furniture Stores	Pacific Telephone
1970	MANSFIELDS FURNITURE	Pacific Telephone

FINDINGS

Year	Uses	Source
1966	Living Rooms inc 4343 Market Riv	Luskey Brothers & Company Inc.
	Al Kramer manager new furniture dealer	Luskey Brothers & Company Inc.
1960	Kirk lens Stores Inc furn C OV 4 a	Luskeys Brothers & Co., Publishers
1955	Kirklens furn 0 V 4 a	Luskeys Brothers & Co., Publishers
1951	Alpha Beta Food Markets Inc	Los Angeles Directory Co.
1946	Alpha Beta Food Markets Inc	Southern California Telephone Company
	Alpha Beta Donut & Malt Shop	Southern California Telephone Company

4344 MARKET ST

Year	Uses	Source
2012	OLD GLORY GENERAL STORE	Cole Information Services
2001	ANTIQUEAVENUE	Haines & Company, Inc.
	TETLEY Richard	Haines & Company, Inc.
1986	Inland Bicycles Center	Pacific Bell Yellow Pages
1977	BE LL CO THE dry cing & fur storge	Pacific Telephone
1970	BELL CO clng & dyng	Pacific Telephone
1966	Bell Co The 4344 Market Riv	Luskey Brothers & Company Inc.
	Karl C & Mrs Bernice Rauch clnrs & dyers	Luskey Brothers & Company Inc.
	Rauch Karl C Bernyce 4344 Market Riv	Luskey Brothers & Company Inc.
1955	Bell Co The dry clnrs 0 V 3 a	Luskeys Brothers & Co., Publishers
	Siirila Una Re Weaving OV 6 a	Luskeys Brothers & Co., Publishers
1945	ABell Co do clnrs	Los Angeles Directory Co.
1936	Tetley F A` & Son real est	Los Angeles Directory Co.
1930	Marr & Graves auto reprs	Los Angeles Directory Co.

4380 MARKET ST

Year	Uses	Source
2012	TOP DAWG AUTO REPAIR	Cole Information Services
2007	TOP DAWG AUTO REPAIR	Cole Information Services
2001	TOP DAWG AUTO RPR	Haines & Company, Inc.
1996	TOP DAWG AUTO REPAIR	Pacific Bell
1990	Brick Wilson auto eq	Pacific Bell
	Wilson Brick auto eq	Pacific Bell
1986	CAR TUN E S AUTO S TE RE O	Pacific Bell Yellow Pages
1981	P & J QUALITY CAR CARE	Pacific Telephone
1977	QUALITY CAR CARE	Pacific Telephone
1970	WILSON PAUL GARAGE	Pacific Telephone
1966	Wilson Fran Auto Service 4380 Market Riv	Luskey Brothers & Company Inc.

FINDINGS

Year	Uses	Source
1960	Wilson Fran Automotive	Luskeys Brothers & Co., Publishers
1955	WIson Fran auto repr OV 6 a	Luskeys Brothers & Co., Publishers
1951	Wilson Fran auto eq	Los Angeles Directory Co.
1946	Brick Wilson auto eq	Southern California Telephone Company
	Wilson Brick auto eq	Southern California Telephone Company
1939	Wilson J H auto access	Los Angeles Directory Co.
1936	California Highway Patrol	Los Angeles Directory Co.
1930	Vacant	Los Angeles Directory Co.

4386 MARKET ST

Year	Uses	Source
1930	Vacant	Los Angeles Directory Co.

4390 MARKET ST

Year	Uses	Source
1936	Willsons Auto Top Shop	Los Angeles Directory Co.
1930	Gruhn E E auto pntr	Los Angeles Directory Co.

4395 MARKET ST

Year	Uses	Source
2001	SMOSSBernice	Haines & Company, Inc.
1990	Riverside Petroleum Co	Pacific Bell
	General Tire Co of Riverside	Pacific Bell
1981	Economy Oil	Pacific Telephone
1977	Economy Oil	Pacific Telephone
1970	Kellys Gulf Service	Pacific Telephone
1966	Kellys Bill Gulf Serv Sta 4395 Market Riv	Luskey Brothers & Company Inc.
1960	GIles Wilshlre Serv serv sta V V 3 a	Luskeys Brothers & Co., Publishers
1955	Under constr	Luskeys Brothers & Co., Publishers
1951	Miller L B radiatr & fendr serv	Los Angeles Directory Co.
	Rentfro Gerald H Garage	Los Angeles Directory Co.
1946	General Tire Co of Riverside	Southern California Telephone Company
	Riverside Petroleum Co	Southern California Telephone Company
1945	AHamilton Ray auto repr	Los Angeles Directory Co.
1939	Riv Petroleum Co	Los Angeles Directory Co.
1936	Riverside Petroleum Co	Los Angeles Directory Co.

FINDINGS

4398 MARKET ST

Year	Uses	Source
2012	DE ANZA MUFFLER SERVICE INC	Cole Information Services
	DE ANZA CAR RENTAL	Cole Information Services
2007	DE ANZA MUFFLER SERVICE INC	Cole Information Services
2001	SERVICE	Haines & Company, Inc.
	DEANZA MUFFLER	Haines & Company, Inc.
1996	DE ANZA MUFFLER SERVICE	Pacific Bell
1990	Hood Lee tires	Pacific Bell
1986	DE AN ZA N ATION AL BANK	Pacific Bell Yellow Pages
	DE AN ZA MUFFLE R S E RVICE	Pacific Bell Yellow Pages
1977	DE AN ZA MUFFLE R S E RVICE	Pacific Telephone
1970	DE ANZA MUFFLER SERVICE	Pacific Telephone
1966	Edw J Buus president	Luskey Brothers & Company Inc.
	Deanza Muffler Service 4398 Market Riv	Luskey Brothers & Company Inc.
1960	De Anza Muffler Shop OV 4 a	Luskeys Brothers & Co., Publishers
1955	Bob & Rays Sav Way Serv serv sta 0 V 3 a	Luskeys Brothers & Co., Publishers
1946	Hood Lee tires	Southern California Telephone Company
1939	Hood C L tires	Los Angeles Directory Co.
1936	Hood C L vulc	Los Angeles Directory Co.
1930	Ernest J A gas sta	Los Angeles Directory Co.

4400 MARKET ST

Year	Uses	Source
1960	Newman Park	Luskeys Brothers & Co., Publishers
1955	approx Newman Park	Luskeys Brothers & Co., Publishers

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
4445 Magnolia Avenue	1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
3620 15TH ST	2012, 2007, 2002, 1996, 1993, 1986, 1981, 1967, 1961, 1960, 1956, 1941, 1939, 1931, 1927, 1925, 1924, 1921
3629 15TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3632 15TH ST	2012, 2007, 2002, 1996, 1993, 1977, 1970, 1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
3636 15TH ST	2012, 2007, 2002, 1996, 1993, 1986, 1981, 1970, 1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
3641 15TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1966, 1961, 1956, 1946, 1945, 1941, 1931, 1927, 1925, 1924, 1921
3642 15TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1977, 1967, 1961, 1956, 1951, 1946, 1941, 1931, 1927, 1925, 1924, 1921
3643 15TH	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3643 15TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1967, 1966, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
3644 15TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1970, 1967, 1961, 1956, 1941, 1931, 1930, 1927, 1925, 1924, 1921
3647 15TH	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3647 15TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1977, 1970, 1967, 1966, 1961, 1956, 1941, 1931, 1930, 1927, 1925, 1924, 1921
3655 14TH ST	2012, 2007, 2002, 1996, 1993, 1986, 1981, 1977, 1967, 1961, 1960, 1956, 1945, 1941, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3682 15TH	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3682 15TH ST	2012, 2007, 2002, 1993, 1990, 1967, 1961, 1956, 1946, 1945, 1941, 1931, 1927, 1925, 1924, 1921
3685 15TH	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3685 15TH ST	2012, 2007, 2002, 1993, 1990, 1967, 1961, 1956, 1946, 1941, 1939, 1931, 1927, 1925, 1924, 1921
3688 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1927, 1925, 1924, 1921

FINDINGS

Address Researched	Address Not Identified in Research Source
3698 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1961, 1960, 1956, 1941, 1931, 1927, 1925, 1924, 1921
3704 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1927, 1925, 1924, 1921
3730 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3752 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1927, 1925, 1924, 1921
3769 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1967, 1966, 1961, 1960, 1956, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3771 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3775 14TH	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3775 14TH ST	2012, 2007, 2002, 1996, 1993, 1981, 1970, 1967, 1961, 1960, 1956, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3775 14TH ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3777 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1941, 1931, 1927, 1925, 1924, 1921
3779 14TH	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3779 14TH ST	2012, 2007, 2002, 1993, 1981, 1977, 1967, 1961, 1960, 1956, 1941, 1939, 1931, 1927, 1925, 1924, 1921
3779 14TH ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3781 14TH	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3781 14TH ST	2012, 2007, 2002, 1996, 1993, 1986, 1981, 1977, 1967, 1961, 1960, 1956, 1945, 1941, 1931, 1927, 1925, 1924, 1921
3781 14TH ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3785 14TH	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3785 14TH ST	2012, 2007, 2002, 1993, 1990, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1951, 1946, 1945, 1941, 1931, 1927, 1925, 1924, 1921
3785 14TH ST	2012, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3787 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
3810 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1941, 1931, 1927, 1925, 1924, 1921
3891 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1941, 1936, 1931, 1927, 1925, 1924, 1921

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Address Researched	Address Not Identified in Research Source
3912 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1945, 1941, 1931, 1927, 1925, 1924, 1921
3950 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1941, 1931, 1930, 1927, 1925, 1924, 1921
3958 14TH ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1927, 1925, 1924, 1921
3980 14TH ST	2012, 2007, 2002, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4011 14TH ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4011 14TH ST	2012, 2007, 2002, 1996, 1993, 1967, 1961, 1960, 1956, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4026 14TH ST	2012, 2007, 1993, 1990, 1967, 1966, 1961, 1960, 1956, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4026 14TH ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4336 MARKET ST	2012, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4340 MARKET ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1931, 1930, 1927, 1925, 1924, 1921
4343 MARKET	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4343 MARKET ST	2012, 2007, 2002, 1993, 1967, 1961, 1956, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4343 MARKET ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4344 MARKET	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4344 MARKET ST	2012, 2007, 2002, 1996, 1993, 1990, 1981, 1967, 1961, 1960, 1956, 1951, 1946, 1941, 1939, 1931, 1927, 1925, 1924, 1921
4344 MARKET ST	2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4380 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1951, 1945, 1941, 1931, 1930, 1927, 1925, 1924, 1921
4380 MARKET	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4380 MARKET ST	2012, 2007, 2002, 1993, 1967, 1961, 1956, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4380 MARKET ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4386 MARKET ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1927, 1925, 1924, 1921
4390 MARKET ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1931, 1927, 1925, 1924, 1921

FINDINGS

Address Researched	Address Not Identified in Research Source
4391 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1956, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4395 MARKET ST	2012, 2007, 2002, 1996, 1993, 1986, 1967, 1961, 1956, 1941, 1931, 1930, 1927, 1925, 1924, 1921
4397 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1927, 1925, 1924, 1921
4398 MARKET	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4398 MARKET ST	2012, 2007, 2002, 1993, 1981, 1967, 1961, 1956, 1951, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4398 MARKET ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4399 MAIN	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4399 MAIN ST	2012, 2007, 2002, 2001, 1993, 1990, 1967, 1966, 1961, 1956, 1946, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4399 MAIN ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4400 MARKET ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1956, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4401 MAIN	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4401 MAIN ST	2012, 2007, 2002, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4401 MAIN ST	2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4404 MAGNOLIA AVE	2012, 2007, 2002, 1996, 1993, 1990, 1970, 1967, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4404 MAGNOLIA ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4408 MAIN ST	2012, 2007, 2002, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4410 MAGNOLIA AVE	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4410 MAGNOLIA ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4414 MAGNOLIA AVE	2012, 2007, 2002, 1996, 1993, 1986, 1970, 1967, 1966, 1961, 1956, 1951, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4414 MAGNOLIA ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4420 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
4422 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1951, 1946, 1941, 1931, 1927, 1925, 1924, 1921

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Address Researched	Address Not Identified in Research Source
4424 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1951, 1946, 1941, 1931, 1927, 1925, 1924, 1921
4426 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1946, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4428 MAGNOLIA AVE	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1941, 1936, 1931, 1927, 1925, 1924, 1921
4428 MAGNOLIA ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4428 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1946, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4429 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1927, 1925, 1924, 1921
4430 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
4432 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1946, 1941, 1931, 1927, 1925, 1924, 1921
4434 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1951, 1946, 1941, 1931, 1927, 1925, 1924, 1921
4435 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1956, 1946, 1941, 1931, 1930, 1927, 1925, 1924, 1921
4436 MAGNOLIA AVE	2012, 2007, 2002, 1996, 1993, 1986, 1970, 1967, 1961, 1956, 1941, 1936, 1931, 1927, 1925, 1924, 1921
4436 MAGNOLIA ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4436 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1946, 1941, 1931, 1930, 1927, 1925, 1924, 1921
4438 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1951, 1946, 1941, 1931, 1927, 1925, 1924, 1921
4440 MAGNOLIA AVE	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1977, 1970, 1967, 1961, 1956, 1946, 1945, 1941, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4440 MAGNOLIA ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4440 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4442 1/2 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4442 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1946, 1941, 1931, 1930, 1927, 1925, 1924, 1921
4444 MAGNOLIA AVE	2012, 2007, 1990, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4444 MAGNOLIA AVE	2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4444 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1951, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4446 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4448 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1946, 1941, 1931, 1927, 1925, 1924, 1921
4450 MAGNOLIA AVE	2012, 2007, 2002, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921

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Address Researched	Address Not Identified in Research Source
4450 MAGNOLIA ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4450 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1961, 1956, 1951, 1946, 1941, 1931, 1927, 1925, 1924, 1921
4453 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1956, 1951, 1946, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4454 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1967, 1961, 1956, 1951, 1945, 1941, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4455 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1967, 1961, 1956, 1951, 1941, 1931, 1927, 1925, 1924, 1921
4456 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1951, 1941, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4458 MAGNOLIA AVE	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1941, 1936, 1931, 1927, 1925, 1924, 1921
4458 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1945, 1941, 1931, 1930, 1927, 1925, 1924, 1921
4460 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1951, 1946, 1941, 1931, 1927, 1925, 1924, 1921
4463 MAIN ST	2012, 2007, 2002, 1993, 1990, 1986, 1977, 1967, 1961, 1956, 1951, 1946, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4465 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1967, 1961, 1956, 1951, 1941, 1931, 1927, 1925, 1924, 1921
4466 MAGNOLIA AVE	2012, 2007, 2002, 1996, 1993, 1986, 1970, 1967, 1961, 1956, 1941, 1936, 1931, 1927, 1925, 1924, 1921
4466 MAGNOLIA ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4466 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
4468 MAGNOLIA AVE	2012, 2007, 2002, 1996, 1993, 1990, 1986, 1981, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4470 MAGNOLIA AVE	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4472 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4473 MAIN ST	2012, 2007, 2002, 1996, 1993, 1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
4480 MAIN	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4480 MAIN ST	2012, 2007, 2002, 1996, 1993, 1986, 1981, 1967, 1961, 1956, 1951, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4480 MAIN ST	2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4481 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
4482 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1977, 1967, 1961, 1956, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4484 MAIN ST	2012, 2007, 2002, 1993, 1990, 1977, 1967, 1961, 1960, 1956, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4486 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1977, 1967, 1961, 1956, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921

FINDINGS

Address Researched	Address Not Identified in Research Source
4488 MAGNOLIA AVE	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1956, 1945, 1941, 1936, 1931, 1927, 1925, 1924, 1921
4488 MAIN	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4488 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4490 MAGNOLIA AVE	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1956, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4494 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1967, 1961, 1956, 1945, 1941, 1931, 1930, 1927, 1925, 1924, 1921
4509 MAIN ST	2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4509 MAIN ST	2012, 2007, 2002, 1996, 1993, 1990, 1967, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4536 MAIN ST	2012, 2007, 2002, 1996, 1993, 1986, 1977, 1970, 1967, 1961, 1956, 1951, 1941, 1931, 1927, 1925, 1924, 1921
4538 MAIN	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4538 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1986, 1967, 1961, 1956, 1951, 1945, 1941, 1931, 1927, 1925, 1924, 1921
4539 MAIN ST	2012, 2007, 2002, 1993, 1977, 1967, 1961, 1956, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4540 MAIN ST	2012, 2007, 2002, 1996, 1993, 1990, 1986, 1967, 1961, 1956, 1946, 1941, 1931, 1927, 1925, 1924, 1921
4542 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1981, 1977, 1967, 1961, 1956, 1941, 1931, 1927, 1925, 1924, 1921
4543 MAIN	2012, 2007, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4543 MAIN ST	2012, 2007, 2002, 2001, 1996, 1993, 1990, 1986, 1981, 1977, 1970, 1967, 1961, 1956, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4545 MAIN ST	2012, 2007, 2002, 1996, 1993, 1990, 1967, 1961, 1956, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4547 MAIN ST	2012, 2007, 2002, 1996, 1993, 1990, 1981, 1977, 1967, 1961, 1956, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4561 MAIN ST	2012, 2007, 2002, 1996, 1993, 1990, 1981, 1967, 1961, 1956, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921
4563 MAIN ST	2012, 2007, 2002, 1996, 1993, 1990, 1977, 1967, 1961, 1956, 1951, 1946, 1945, 1941, 1939, 1936, 1931, 1930, 1927, 1925, 1924, 1921

Appendix H

Additional Parcels Included in the Riverside Community Hospital Specific Plan

Dudek researched regulatory agency databases for records related to the parcels/addresses covering the remainder of the hospital campus properties included in the Specific Plan. These properties are located at the following addresses: 4410, 4414, 4420, 4426, and 4646 Brockton Avenue in Riverside, California (Figure 2). These properties are located on Assessor's Parcel Numbers 217-060-024, 217-060-026, 217-060-027, 217-060-028, and 217-300-015.

An EDR database search for these properties indicated that one address was listed in a regulatory agency database. This site, Computerized Diagnostic Imaging located at 4646 Brockton Avenue, was listed in the RCRA-SQG, FINDS, and HAZNET databases. The RCRA-SQG database reports that the site qualifies as a small quantity generator of hazardous waste; no violations were reported for the site. The HAZNET database entry reports that the photochemicals/ photoprocessing wastes were transported to a recycler from the years 1997 to 2001. The FINDs database references information presented in the RCRA-SQG and HAZNET databases. None of the databases reported indicate that this property has reported releases to the subsurface.

However, the database listings for near-by properties indicates that an unauthorized release of gasoline occurred at 4491 Brockton Avenue (located west of the additional parcels) in 1986. The extent of contamination at the site has not been fully characterized. Groundwater flow direction is not indicated in the EDR report or on the Geotracker website. Groundwater samples collected at the site in 2011 reported a benzene concentration of 3,390 µg/L. Based on the proximity of this site to the additional parcels, this site may have potentially impacted environmental conditions at the additional parcels. The EDR database report is presented with Appendix H.

Historical Sanborn fire insurance maps and city directory listings were requested from EDR. Sanborn maps and city directories provide information regarding the historical uses of the subject property and surrounding properties. The Sanborn Map Report indicated that these additional properties were previously used as residences, sports fields, and a machine shop between 1908 and 1969. Additionally, a former dry cleaners was located adjacent to the parcels included in the RCH specific plan. It is possible that these former sites impacted the environmental conditions in this western area.

RCH
Brockton Ave/14th Street
Riverside, CA 92506

Inquiry Number: 3627521.1s
June 05, 2013

The EDR Radius Map™ Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
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GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

BROCKTON AVE/14TH STREET
RIVERSIDE, CA 92506

COORDINATES

Latitude (North):	33.9758000 - 33˚ 58' 32.88''
Longitude (West):	117.3855000 - 117˚ 23' 7.80''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	464388.9
UTM Y (Meters):	3759345.2
Elevation:	796 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	33117-H4 RIVERSIDE WEST, CA
Most Recent Revision:	1980
East Map:	33117-H3 RIVERSIDE EAST, CA
Most Recent Revision:	1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2012
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls
LUCIS ..... Land Use Control Information System

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land

EXECUTIVE SUMMARY

FEMA UST ..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP ..... Voluntary Cleanup Program Properties
INDIAN VCP ..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
HIST Cal-Sites ..... Historical Calsites Database
SCH ..... School Property Evaluation Program
Toxic Pits ..... Toxic Pits Cleanup Act Sites
CDL ..... Clandestine Drug Labs
US HIST CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LIENS ..... Environmental Liens Listing
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators
DOT OPS ..... Incident and Accident Data
DOD ..... Department of Defense Sites
FUDS ..... Formerly Used Defense Sites
CONSENT ..... Superfund (CERCLA) Consent Decrees
ROD ..... Records Of Decision
UMTRA ..... Uranium Mill Tailings Sites
US MINES ..... Mines Master Index File
TRIS ..... Toxic Chemical Release Inventory System
TSCA ..... Toxic Substances Control Act
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

EXECUTIVE SUMMARY

HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
CA BOND EXP. PLAN	Bond Expenditure Plan
UIC	UIC Listing
NPDES	NPDES Permits Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
WIP	Well Investigation Program Case List
ENF	Enforcement Action Listing
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing
Financial Assurance	Financial Assurance Information Listing
LEAD SMELTERS	Lead Smelter Sites
2020 COR ACTION	2020 Corrective Action Program List
US AIRS	Aerometric Information Retrieval System Facility Subsystem
PRP	Potentially Responsible Parties
WDS	Waste Discharge System
EPA WATCH LIST	EPA WATCH LIST
US FIN ASSUR	Financial Assurance Information
PCB TRANSFORMER	PCB Transformer Registration Database
PROC	Certified Processors Database
MWMP	Medical Waste Management Program Listing

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

EXECUTIVE SUMMARY

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/12/2013 has revealed that there are 10 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROCKTON AUTO CLINIC	***4468 BROCKTON AVE***	***NE 0 - 1/8 (0.003 mi.)***	***A4***	***9***
DIAGNOSTIC BREAST IMAGING CTR	***4500 BROCKTON AVE STE 2***	***NNE 0 - 1/8 (0.003 mi.)***	***B6***	***11***
CLINES AUTO BODY	***4491 BROOKTON AVE***	***NNE 0 - 1/8 (0.004 mi.)***	***A8***	***14***
BRITISH SPORTS AND IMPORTS	***4489 BROCKTON AVE***	***NNE 0 - 1/8 (0.005 mi.)***	***A13***	***18***
COMPUTERIZED DIAGNOSTIC IMAGIN	***4646 BROCKTON AVE***	***W 0 - 1/8 (0.007 mi.)***	***18***	***33***
COMPUTERIZED DIAGNOSTIC IMAGIN	***4000 14TH ST***	***ENE 0 - 1/8 (0.103 mi.)***	***20***	***36***
ARCO FACILITY NO 09713	***4395 MARKET ST***	***ENE 1/8 - 1/4 (0.182 mi.)***	***F41***	***68***
SHERWIN-WILLIAMS CO	***4267 MARKET ST***	***ENE 1/8 - 1/4 (0.209 mi.)***	***E82***	***134***
LEWIS P M LABORATORIES#	***4121 BROCKTON AVE***	***NE 1/8 - 1/4 (0.211 mi.)***	***83***	***136***

Lower Elevation	Address	Direction / Distance	Map ID	Page
PINE CENTER CLEANERS	***4644 PINE ST***	***WNW 1/8 - 1/4 (0.202 mi.)***	***I73***	***110***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 03/13/2013 has revealed that there are 3 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GRIN CHEMICAL COMPANY Status: No Further Action	3972 MAIN STREET	ENE 1/4 - 1/2 (0.385 mi.)	T141	236
FAIRFIELD CHEMICALS Status: Inactive - Needs Evaluation	3075 14TH ST	ESE 1/2 - 1 (0.719 mi.)	146	243
SO CAL GAS/RIVERSIDE MGP Status: Active	***10TH STREET AND HOWARD***	***E 1/2 - 1 (0.878 mi.)***	***148***	***244***

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 03/18/2013 has revealed that there are 18 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CAMPBELL OIL COMPANY	***4491***	***NNE 0 - 1/8 (0.005 mi.)***	***A15***	***22***
CAMPBELL OIL	4491 BROCKTON AVE	NNE 0 - 1/8 (0.005 mi.)	A16	24
Status: Open - Assessment & Interim Remedial Action				
ASSOCIATED NATIONAL MORTGAGE	4279 EL DORADO ST	N 1/8 - 1/4 (0.139 mi.)	D23	39
ASSOCIATED NATIONAL MORTG	***4279 EL DORADO***	***N 1/8 - 1/4 (0.139 mi.)***	***D24***	***41***
Status: Completed - Case Closed				
THRIFTY OIL #343/ ARCO #9713	4395 MARKET ST	ENE 1/8 - 1/4 (0.182 mi.)	F35	55
Not reported	***4395 MARKET***	***ENE 1/8 - 1/4 (0.182 mi.)***	***F37***	***56***
Status: Open - Remediation				
FOAMY CARWASH	***4404 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.191 mi.)***	***F49***	***76***
Status: Completed - Case Closed				
RIVERSIDE COMMUNITY HOSPITAL	***4445 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.196 mi.)***	***H54***	***84***
Status: Completed - Case Closed				
RIVERSIDE COMMUNITY HOSPITAL	***4445 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.196 mi.)***	***H56***	***87***
PUBLIC EMPLOYEE RIV. CO (	***4336***	***ENE 1/8 - 1/4 (0.200 mi.)***	***E67***	***101***
PUBLIC EMPLOYEE RIV. CO (PERC)	***4336 MARKET ST***	***ENE 1/8 - 1/4 (0.200 mi.)***	***E69***	***105***
RIVERSIDE PRODUCE COMPANY	***4271 MARKET ST***	***ENE 1/8 - 1/4 (0.208 mi.)***	***E80***	***121***
Status: Open - Remediation				
FOAMY CAR WASH	4401 MAIN ST	E 1/4 - 1/2 (0.265 mi.)	K105	163
ROME'S TIRE	***4150 MARKET ST***	***ENE 1/4 - 1/2 (0.268 mi.)***	***N109***	***169***
Status: Completed - Case Closed				
TRANSPORTATION CENTER (RIVERSI	***4293 ORANGE ST***	***E 1/4 - 1/2 (0.356 mi.)***	***S131***	***211***
Status: Completed - Case Closed				
COUNTY GARAGE (RIVERSIDE)	***4293 ORANGE ST***	***E 1/4 - 1/2 (0.356 mi.)***	***S132***	***216***
RSDE COUNTY ADMINISTRATIVE CTR	***4080 LEMON ST***	***ENE 1/4 - 1/2 (0.488 mi.)***	***U142***	***237***
Not reported	***4080 LEMON***	***ENE 1/4 - 1/2 (0.488 mi.)***	***U143***	***240***
Status: Completed - Case Closed				

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 03/18/2013 has revealed that there are 3 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PUBLIC EMPLOYEE RIV. CO (PERC)	***4336 MARKET ST***	***ENE 1/8 - 1/4 (0.200 mi.)***	***E69***	***105***
Facility Status: Completed - Case Closed				
MARKET STREET PROPERTIES	3801 MARKET STREET	NE 1/4 - 1/2 (0.490 mi.)	144	242
Facility Status: Completed - Case Closed				

Lower Elevation	Address	Direction / Distance	Map ID	Page
PINE CENTER CLEANERS	***4644 PINE ST***	***WNW 1/8 - 1/4 (0.202 mi.)***	***I73***	***110***
Facility Status: Open - Site Assessment				

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 03/18/2013 has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RIVERSIDE COUNTY OFFICE OF EDU	3939 13TH ST	ENE 0 - 1/8 (0.111 mi.)	C22	39
ARCO #9713	4395 MARKET ST	ENE 1/8 - 1/4 (0.182 mi.)	F36	56
RIVERSIDE COMMUNITY HOSPITAL	***4445 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.196 mi.)***	***H56***	***87***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 12/10/2012 has revealed that there are 62 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
3874 13TH	***3874 13TH***	***ENE 1/8 - 1/4 (0.149 mi.)***	***C25***	***42***
3858 13TH	***3858 13TH***	***ENE 1/8 - 1/4 (0.159 mi.)***	***E26***	***44***
3785 14TH	***3785 14TH***	***ENE 1/8 - 1/4 (0.161 mi.)***	***F27***	***46***
3781 14TH	***3781 14TH***	***ENE 1/8 - 1/4 (0.162 mi.)***	***F28***	***48***
3779 14TH	***3779 14TH***	***ENE 1/8 - 1/4 (0.162 mi.)***	***F29***	***50***
3775 14TH	***3775 14TH***	***ENE 1/8 - 1/4 (0.163 mi.)***	***F30***	***52***
4395 MARKET	***4395 MARKET***	***ENE 1/8 - 1/4 (0.182 mi.)***	***F38***	***64***
4343 MARKET	***4343 MARKET***	***ENE 1/8 - 1/4 (0.188 mi.)***	***E45***	***71***
3895 12TH	***3895 12TH***	***ENE 1/8 - 1/4 (0.190 mi.)***	***G46***	***73***
3882 12TH	***3882 12TH***	***ENE 1/8 - 1/4 (0.194 mi.)***	***G50***	***80***
4398 MARKET	***4398 MARKET***	***ENE 1/8 - 1/4 (0.194 mi.)***	***F51***	***82***
4380 MARKET	***4380 MARKET***	***ENE 1/8 - 1/4 (0.196 mi.)***	***F58***	***92***
3878 12TH	***3878 12TH***	***ENE 1/8 - 1/4 (0.196 mi.)***	***G60***	***94***
3877 12TH	***3877 12TH***	***ENE 1/8 - 1/4 (0.198 mi.)***	***G61***	***96***
4344 MARKET	***4344 MARKET***	***ENE 1/8 - 1/4 (0.199 mi.)***	***E65***	***99***
4336 MARKET	***4336 MARKET***	***ENE 1/8 - 1/4 (0.200 mi.)***	***E68***	***103***
3868 12TH	***3868 12TH***	***ENE 1/8 - 1/4 (0.200 mi.)***	***G70***	***105***
4293 MARKET	***4293 MARKET***	***ENE 1/8 - 1/4 (0.201 mi.)***	***E71***	***107***
4310 MARKET	***4310 MARKET***	***ENE 1/8 - 1/4 (0.204 mi.)***	***E75***	***114***
4166 ALMOND	***4166 ALMOND***	***NE 1/8 - 1/4 (0.207 mi.)***	***G78***	***117***
4271 MARKET	***4271 MARKET***	***ENE 1/8 - 1/4 (0.208 mi.)***	***E79***	***119***
4267 MARKET	***4267 MARKET***	***ENE 1/8 - 1/4 (0.209 mi.)***	***E81***	***132***
4282 MARKET	***4282 MARKET***	***ENE 1/8 - 1/4 (0.211 mi.)***	***E84***	***137***
3843 12TH	***3843 12TH***	***ENE 1/8 - 1/4 (0.215 mi.)***	***G85***	***139***
4225 MARKET	***4225 MARKET***	***ENE 1/8 - 1/4 (0.225 mi.)***	***J86***	***141***
4212 MARKET	***4212 MARKET***	***ENE 1/8 - 1/4 (0.237 mi.)***	***J88***	***143***
4199 MARKET	***4199 MARKET***	***ENE 1/8 - 1/4 (0.239 mi.)***	***J92***	***146***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
3890 11TH	*3890 11TH*	*NE 1/4 - 1/2 (0.253 mi.)*	*M100*	*153*
3891 11TH	*3891 11TH*	*NE 1/4 - 1/2 (0.254 mi.)*	*M101*	*155*
3780 12TH	*3780 12TH*	*ENE 1/4 - 1/2 (0.255 mi.)*	*J102*	*157*
3875 11TH	*3875 11TH*	*NE 1/4 - 1/2 (0.260 mi.)*	*M103*	*159*
3770 12TH	*3770 12TH*	*ENE 1/4 - 1/2 (0.261 mi.)*	*J104*	*161*
4399 MAIN	*4399 MAIN*	*E 1/4 - 1/2 (0.265 mi.)*	*K106*	*163*
3760 12TH	*3760 12TH*	*ENE 1/4 - 1/2 (0.268 mi.)*	*J107*	*165*
3855 11TH	*3855 11TH*	*NE 1/4 - 1/2 (0.268 mi.)*	*M108*	*167*
4353 MAIN	*4353 MAIN*	*E 1/4 - 1/2 (0.271 mi.)*	*K111*	*172*
4135 MARKET	*4135 MARKET*	*ENE 1/4 - 1/2 (0.273 mi.)*	*N112*	*174*
4329 MAIN	*4329 MAIN*	*E 1/4 - 1/2 (0.274 mi.)*	*O113*	*176*
4060 ALMOND	*4060 ALMOND*	*NE 1/4 - 1/2 (0.277 mi.)*	*M114*	*178*
4307 MAIN	*4307 MAIN*	*E 1/4 - 1/2 (0.277 mi.)*	*O115*	*180*
4295 MAIN	*4295 MAIN*	*ENE 1/4 - 1/2 (0.280 mi.)*	*O116*	*182*
4281 MAIN	*4281 MAIN*	*ENE 1/4 - 1/2 (0.283 mi.)*	*O118*	*185*
3732 12TH	*3732 12TH*	*ENE 1/4 - 1/2 (0.286 mi.)*	*P119*	*187*
4267 MAIN	*4267 MAIN*	*ENE 1/4 - 1/2 (0.287 mi.)*	*O120*	*189*
4261 MAIN	*4261 MAIN*	*ENE 1/4 - 1/2 (0.289 mi.)*	*O121*	*191*
4255 MAIN	*4255 MAIN*	*ENE 1/4 - 1/2 (0.290 mi.)*	*P122*	*193*
4093 MARKET	*4093 MARKET*	*ENE 1/4 - 1/2 (0.296 mi.)*	*N123*	*195*
4229 MAIN	*4229 MAIN*	*ENE 1/4 - 1/2 (0.298 mi.)*	*P124*	*197*
4040 ALMOND	*4040 ALMOND*	*NE 1/4 - 1/2 (0.300 mi.)*	*M125*	*199*
4213 MAIN	*4213 MAIN*	*ENE 1/4 - 1/2 (0.303 mi.)*	*P126*	*201*
3890 10TH	*3890 10TH*	*NE 1/4 - 1/2 (0.321 mi.)*	*Q127*	*203*
3872 10TH	*3872 10TH*	*NE 1/4 - 1/2 (0.326 mi.)*	*Q128*	*205*
4035 MARKET	*4035 MARKET*	*ENE 1/4 - 1/2 (0.330 mi.)*	*R129*	*207*
4019 MARKET	*4019 MARKET*	*NE 1/4 - 1/2 (0.339 mi.)*	*R130*	*209*
3796 10TH	*3796 10TH*	*ENE 1/4 - 1/2 (0.357 mi.)*	*R133*	*220*
4075 MAIN	*4075 MAIN*	*ENE 1/4 - 1/2 (0.359 mi.)*	*T134*	*222*
4049 MAIN	*4049 MAIN*	*ENE 1/4 - 1/2 (0.365 mi.)*	*T135*	*224*
3774 10TH	*3774 10TH*	*ENE 1/4 - 1/2 (0.367 mi.)*	*R136*	*226*
3768 10TH	*3768 10TH*	*ENE 1/4 - 1/2 (0.370 mi.)*	*R137*	*228*
4015 MAIN	*4015 MAIN*	*ENE 1/4 - 1/2 (0.373 mi.)*	*T138*	*230*
3760 10TH	*3760 10TH*	*ENE 1/4 - 1/2 (0.374 mi.)*	*R139*	*232*
4001 MAIN	*4001 MAIN*	*ENE 1/4 - 1/2 (0.377 mi.)*	*T140*	*234*

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EVERGREEN CEMETARY DISPOSAL SI	*4414 14TH STREET*	*NNW 1/4 - 1/2 (0.281 mi.)*	*117*	*184*

EXECUTIVE SUMMARY

Local Lists of Registered Storage Tanks

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 6 CA FID UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COUNTY OFFICE OF EDUCATION	***3939 13TH ST***	***ENE 0 - 1/8 (0.111 mi.)***	***C21***	***38***
THRIFTY OIL #343	***4395 MARKET ST***	***ENE 1/8 - 1/4 (0.182 mi.)***	***F40***	***67***
FOAMY CARWASH	***4404 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.191 mi.)***	***F49***	***76***
RIVERSIDE COMMUNITY HOSPITAL	4445 MAGNOLIA AVE	E 1/8 - 1/4 (0.196 mi.)	H55	86
FIRESTONE STORES #2768	***4199 MARKET ST***	***ENE 1/8 - 1/4 (0.239 mi.)***	***J94***	***148***
RIVERSIDE CITY COLLEGE	***4800 MAGNOLIA AVE***	***S 1/8 - 1/4 (0.246 mi.)***	***L99***	***151***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 10 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
?	4481 BROCKTON AVE	NNE 0 - 1/8 (0.005 mi.)	A9	16
BUD & HARRY'S SERVICE	4481 BROCKTON AVE	NNE 0 - 1/8 (0.005 mi.)	A11	17
PRESS ENTERPRISE GARAGE	4491 BROCKTON AVE	NNE 0 - 1/8 (0.005 mi.)	A14	21
RIVERSIDE MONUMENTAL CO.	4291 CEDAR ST	N 1/8 - 1/4 (0.174 mi.)	D32	54
RIVERSIDE MONUMENTAL COMPANY	4291 CEDAR ST	N 1/8 - 1/4 (0.174 mi.)	D33	54
THRIFTY OIL STN. #343	4395 MARKET ST	ENE 1/8 - 1/4 (0.182 mi.)	F42	70
FOAMY CARWASH	4404 MAGNOLIA AVE	E 1/8 - 1/4 (0.191 mi.)	F48	75
RIVERSIDE PRODUCE COMPANY	***4271 MARKET ST***	***ENE 1/8 - 1/4 (0.208 mi.)***	***E80***	***121***
FIRESTONE STORES #2768	4199 MARKET ST	ENE 1/8 - 1/4 (0.239 mi.)	J91	146
RIVERSIDE CITY COLLEGE	4800 MAGNOLIA AVE	S 1/8 - 1/4 (0.246 mi.)	L98	150

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 6 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COUNTY OFFICE OF EDUCATION	***3939 13TH ST***	***ENE 0 - 1/8 (0.111 mi.)***	***C21***	***38***
THRIFTY OIL #343	***4395 MARKET ST***	***ENE 1/8 - 1/4 (0.182 mi.)***	***F40***	***67***
FOAMY CARWASH	***4404 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.191 mi.)***	***F49***	***76***
RIVERSIDE COMMUNITY HOSPITAL	***4445 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.196 mi.)***	***H56***	***87***
FIRESTONE STORES #2768	***4199 MARKET ST***	***ENE 1/8 - 1/4 (0.239 mi.)***	***J94***	***148***
RIVERSIDE CITY COLLEGE	***4800 MAGNOLIA AVE***	***S 1/8 - 1/4 (0.246 mi.)***	***L99***	***151***

Other Ascertainable Records

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 9 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CAMPBELL OIL COMPANY	***4491***	***NNE 0 - 1/8 (0.005 mi.)***	***A15***	***22***
ASSOCIATED NATIONAL MORTG	***4279 EL DORADO***	***N 1/8 - 1/4 (0.139 mi.)***	***D24***	***41***
THRIFTY OIL #343	***4395 MARKET ST***	***ENE 1/8 - 1/4 (0.182 mi.)***	***F40***	***67***
FOAMY CARWASH	***4404 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.191 mi.)***	***F49***	***76***
RIVERSIDE COMMUNITY HOSPITAL	***4445 MAGNOLIA AVE***	***E 1/8 - 1/4 (0.196 mi.)***	***H54***	***84***
PUBLIC EMPLOYEE RIV. CO (	***4336***	***ENE 1/8 - 1/4 (0.200 mi.)***	***E67***	***101***
ROME'S TIRE	***4150 MARKET ST***	***ENE 1/4 - 1/2 (0.268 mi.)***	***N109***	***169***
COUNTY GARAGE (RIVERSIDE)	***4293 ORANGE ST***	***E 1/4 - 1/2 (0.356 mi.)***	***S132***	***216***
RSDE COUNTY ADMINISTRATIVE CTR	***4080 LEMON ST***	***ENE 1/4 - 1/2 (0.488 mi.)***	***U142***	***237***

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 2 Notify 65 sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RIME'S TIRE SERVICE, INC.	4150 MARKET STREET	ENE 1/4 - 1/2 (0.268 mi.)	N110	171
STEARNS DOWNTOWN LIQUOR	4029 7TH	NE 1/2 - 1 (0.534 mi.)	145	243

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 12/11/2012 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PINE CENTER CLEANERS	***4644 PINE ST***	***WNW 1/8 - 1/4 (0.202 mi.)***	***I73***	***110***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants

(manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the EDR MGP list, as provided by EDR, has revealed that there is 1 EDR MGP site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RIVERSIDE GAS AND ELECTRIC LIG	3084 E. 10TH STREET	E 1/2 - 1 (0.801 mi.)	147	244

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 20 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SMITH & PATTISON	4468 BROCKTON AVE	NE 0 - 1/8 (0.003 mi.)	A3	8
BUD & HARRY S FRIENDLY SERVICE	4481 BROCKTON AVE	NNE 0 - 1/8 (0.005 mi.)	A10	16
Not reported	4489 BROCKTON AVE	NNE 0 - 1/8 (0.005 mi.)	A12	17
Not reported	4491 BROCKTON AVE	NNE 0 - 1/8 (0.005 mi.)	A17	33
REEVES REPAIR SERVICE	3769 14TH ST	ENE 1/8 - 1/4 (0.165 mi.)	F31	54
MILLER S L B RADIATOR & FENDER	4395 MARKET ST	ENE 1/8 - 1/4 (0.182 mi.)	F39	66
RIVIRSIDEI PIETROLE UM CO	4395 MARKET DR	ENE 1/8 - 1/4 (0.183 mi.)	F43	71
WHITTAKER W E	4404 MAGNOLIA AVE	E 1/8 - 1/4 (0.191 mi.)	F47	75
EMINERT J A	4398 MARKET ST	ENE 1/8 - 1/4 (0.194 mi.)	F52	84
WLLLSON S AUTO TOP SHOP	4390 MARKET DR	ENE 1/8 - 1/4 (0.194 mi.)	F53	84
WILSON J HAROLD	4380 MARKET DR	ENE 1/8 - 1/4 (0.196 mi.)	F57	91
WILSON FRAN	4380 MARKET ST	ENE 1/8 - 1/4 (0.196 mi.)	F59	94
WILSON J HAROLD	4340 MARKET DR	ENE 1/8 - 1/4 (0.199 mi.)	E63	98
MARR & GRAVES	4344 MARKET ST	ENE 1/8 - 1/4 (0.199 mi.)	E64	99
STANDARD STATIONS INC	4488 MAGNOLIA AVE	E 1/8 - 1/4 (0.205 mi.)	H76	116
ALLEN FRANK	4214 MARKET ST	ENE 1/8 - 1/4 (0.236 mi.)	J87	143
HOLMES LE ROY	4212 MARKET ST	ENE 1/8 - 1/4 (0.237 mi.)	J90	145
FIRESTONE AUTO SUPPLY & SERVIC	4199 MARKET	ENE 1/8 - 1/4 (0.239 mi.)	J93	148
GEISEL JOHN	3730 14TH ST	E 1/8 - 1/4 (0.244 mi.)	K95	149
WESTENHAVER & WOOD	4198 MARKET ST	ENE 1/8 - 1/4 (0.245 mi.)	J97	150

EXECUTIVE SUMMARY

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 14 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ROYAL LAUNDRY CO INC	4440 BROCKTON AVE	NE 0 - 1/8 (0.002 mi.)	A1	8
ROYAL LAUNDRY CO INC	4444 BROCKTON AVE	NE 0 - 1/8 (0.002 mi.)	A2	8
TIP TOP LAUNDRY	4407 BROCKTON AVE	NE 0 - 1/8 (0.003 mi.)	A5	11
ACME CURTAIN LAUNDRY	4435 BROCKTON AVE	NE 0 - 1/8 (0.004 mi.)	A7	14
RIVERSIDE LAUNDRY	4459 BROCKTON AVE	NNE 0 - 1/8 (0.044 mi.)	B19	36
OLINJIES COUNTY CLINIC	3810 14TH ST	ENE 1/8 - 1/4 (0.177 mi.)	F34	55
RIVERSIDE PETROLEUM CO	4395 MARKET DR	ENE 1/8 - 1/4 (0.183 mi.)	F44	71
BJ ET L CO THE	4344 MARKET DR	ENE 1/8 - 1/4 (0.199 mi.)	E62	98
BELL CLEANING CO	4336 MARKET DR	ENE 1/8 - 1/4 (0.200 mi.)	E66	101
YOUNG G L	4466 MAGNOLIA AVE	E 1/8 - 1/4 (0.203 mi.)	H74	114
STANDARD STATIONS INC	4488 MAGNOLIA AV	E 1/8 - 1/4 (0.205 mi.)	H77	117
STEPANEK H W	4212 MARKET ST	ENE 1/8 - 1/4 (0.237 mi.)	J89	145
GEISEL JOHN	3730 14TH ST	E 1/8 - 1/4 (0.244 mi.)	K96	149

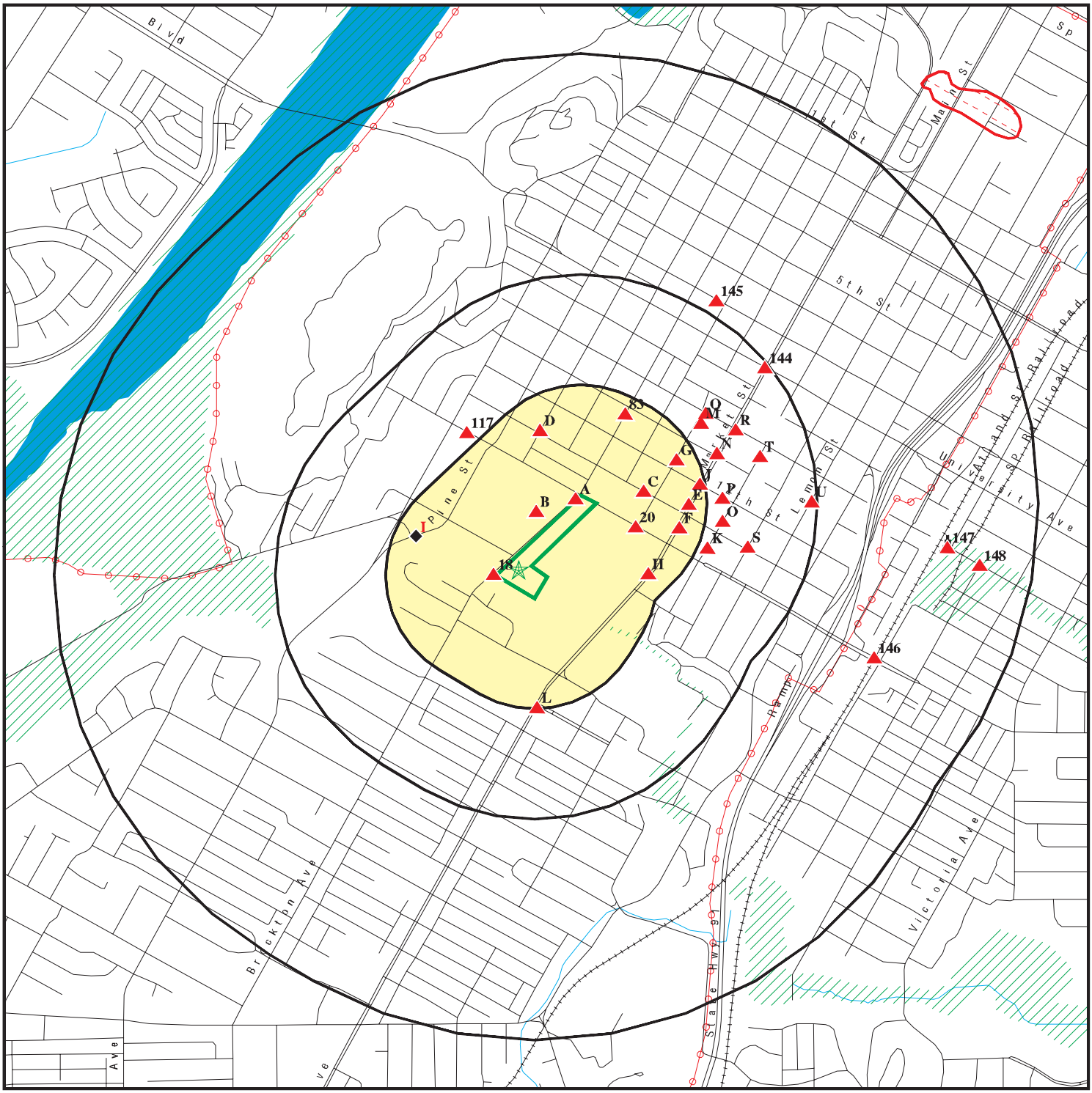
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	4644 PINE ST	WNW 1/8 - 1/4 (0.202 mi.)	I72	109

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 19 records.

Site Name	Database(s)
CHEVRON #9-9398	HIST CORTESE, LUST
NORTH WEST PIPE	HIST CORTESE, Notify 65
UNOCAL #	HIST CORTESE
CAMP YOUNG	HIST CORTESE
GLEN AVON TRANSPORTATION YARD	SWF/LF, NPDES
LANDFILL,TEQUESQUITE-CLOSED	SWF/LF, LDS, Financial Assurance
PACIFIC AIRMOTIVE	CERC-NFRAP
CITY OF RIVERSIDE GRANITE PIT MINE	SWF/LF
SMITH PROPERTY	LUST
SMITH PROPERTY	LUST
RVSD CITY LANDFILL	LUST
UCR - PARKING LOT 6	LUST
U C RIVERSIDE PARKING LOT #6	LUST
BLYTHE AIRPORT	HIST UST
GENERAL TELEPHONE OF CA	RCRA-SQG, FINDS
SHELL SERVICE STATION	RCRA-SQG, FINDS
NE ALMOND ST AND 14TH ST	US BROWNFIELDS, FINDS
N OF 14TH ST, ON S SIDE OF BLOCK	US BROWNFIELDS, FINDS
FST SAND & GRAVEL, INC.	US MINES

OVERVIEW MAP - 3627521.1s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	RCH	CLIENT:	Dudek & Associates
ADDRESS:	Brockton Ave/14th Street Riverside CA 92506	CONTACT:	Susie Smith
LAT/LONG:	33.9758 / 117.3855	INQUIRY #:	3627521.1s
		DATE:	June 05, 2013 6:33 pm

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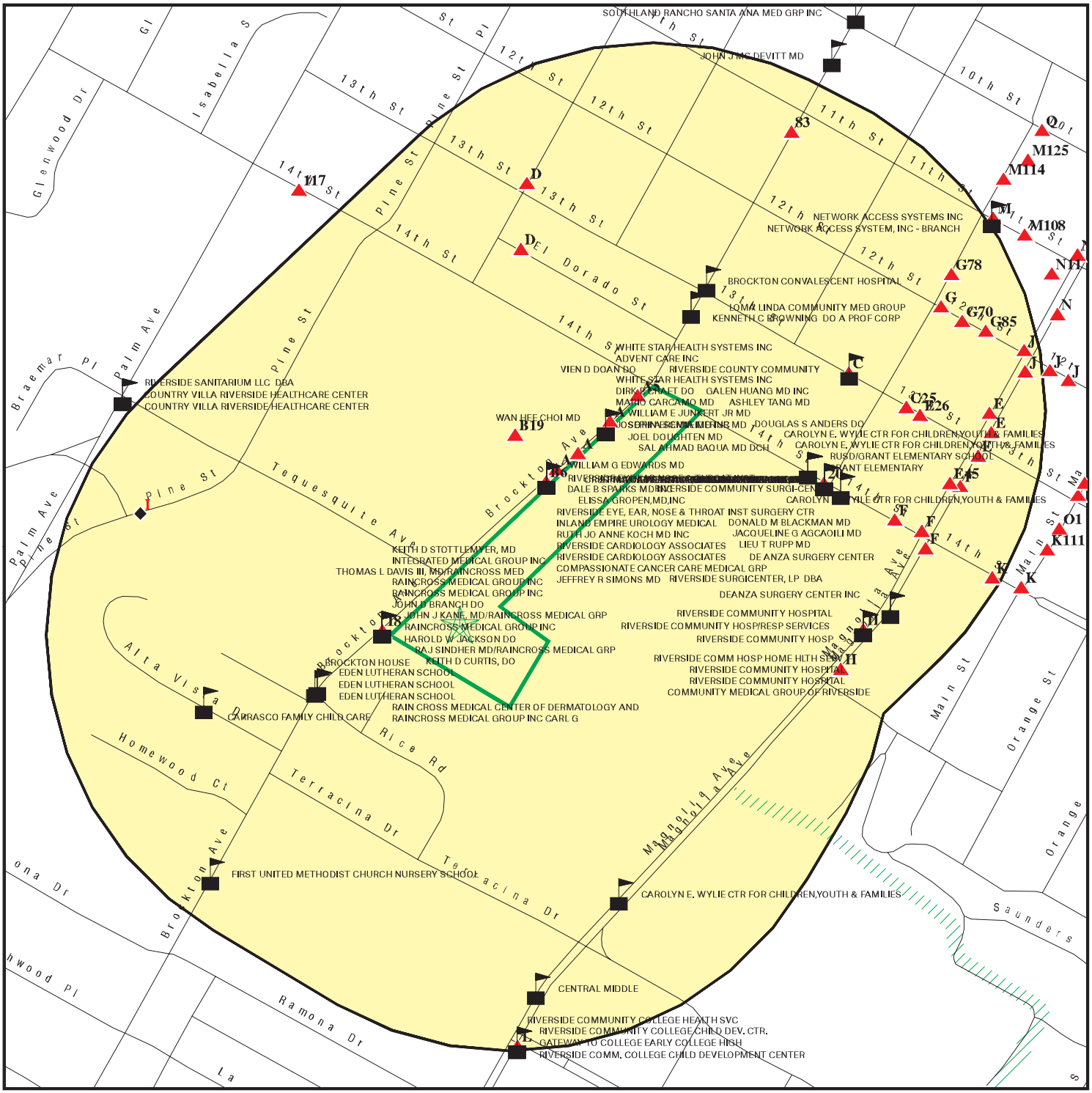
DETAIL MAP - 3627521.1s



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: RCH	CLIENT: Dudek & Associates
ADDRESS: Brockton Ave/14th Street Riverside CA 92506	CONTACT: Susie Smith
LAT/LONG: 33.9758 / 117.3855	INQUIRY #: 3627521.1s
	DATE: June 05, 2013 6:36 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		6	4	NR	NR	NR	10
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	1	2	NR	3
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		2	10	6	NR	NR	18

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500		0	2	1	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		1	2	NR	NR	NR	3
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	27	35	NR	NR	62
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	1	NR	NR	1
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		1	5	NR	NR	NR	6
HIST UST	0.250		3	7	NR	NR	NR	10
SWEEPS UST	0.250		1	5	NR	NR	NR	6
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		1	5	3	NR	NR	9
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	1	1	NR	2
DRYCLEANERS	0.250		0	1	NR	NR	NR	1
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PROC	0.500		0	0	0	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	1	NR	1
EDR US Hist Auto Stat	0.250		4	16	NR	NR	NR	20
EDR US Hist Cleaners	0.250		5	9	NR	NR	NR	14

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
NE
< 1/8
0.002 mi.
9 ft.

ROYAL LAUNDRY CO INC
4440 BROCKTON AVE
RIVERSIDE, CA

EDR US Hist Cleaners **1009145777**
N/A

Site 1 of 16 in cluster A

Relative:
Higher

Actual:
798 ft.

EDR Historical Cleaners:

Name:	ROYAL LAUNDRY CO INC
Year:	1945
Type:	FAMILY LAUNDRY WORK
Name:	ROYAL LAUNDRY CO INC
Year:	1951
Type:	LAUNDRIES

A2
NE
< 1/8
0.002 mi.
10 ft.

ROYAL LAUNDRY CO INC
4444 BROCKTON AVE
RIVERSIDE, CA

EDR US Hist Cleaners **1009143317**
N/A

Site 2 of 16 in cluster A

Relative:
Higher

Actual:
799 ft.

EDR Historical Cleaners:

Name:	ROYAL LAUNDRY CO INC
Year:	1936
Type:	LAUNDRIES

A3
NE
< 1/8
0.003 mi.
14 ft.

SMITH & PATTISON
4468 BROCKTON AVE
RIVERSIDE, CA

EDR US Hist Auto Stat **1009023250**
N/A

Site 3 of 16 in cluster A

Relative:
Higher

Actual:
798 ft.

EDR Historical Auto Stations:

Name:	SMITH & PATTISON
Year:	1945
Type:	AUTOMOBILE REPAIRING
Name:	SMITH & PATTISON
Year:	1951
Type:	AUTOMOBILE REPAIRING
Name:	BROCKTON AUTO CLINIC
Year:	1999
Address:	4468 BROCKTON AVE
Name:	BROCKTON AUTO CLINIC
Year:	2000
Address:	4468 BROCKTON AVE
Name:	BROCKTON AUTO CLINIC
Year:	2001
Address:	4468 BROCKTON AVE
Name:	BROCKTON AUTO CLINIC
Year:	2002
Address:	4468 BROCKTON AVE
Name:	BROCKTON AUTO CLINIC

SMITH & PATTISON (Continued) **1009023250**

Year: 2005
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2006
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2007
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2008
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2009
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2010
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2011
Address: 4468 BROCKTON AVE

Name: BROCKTON AUTO CLINIC
Year: 2012
Address: 4468 BROCKTON AVE

A4
NE
< 1/8
0.003 mi.
14 ft.

BROCKTON AUTO CLINIC
4468 BROCKTON AVE
RIVERSIDE, CA 92501

RCRA-SQG **1004675600**
FINDS **CAR000074989**

Site 4 of 16 in cluster A

Relative:
Higher

Actual:
798 ft.

RCRA-SQG:

Date form received by agency:	06/08/2000
Facility name:	BROCKTON AUTO CLINIC
Facility address:	4468 BROCKTON AVE RIVERSIDE, CA 925014005
EPA ID:	CAR000074989
Contact:	CLINT RANDOLF
Contact address:	4468 BROCKTON AVE RIVERSIDE, CA 925014005
Contact country:	US
Contact telephone:	(909) 682-7104
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

BROCKTON AUTO CLINIC (Continued) **1004675600**

Owner/Operator Summary:

Owner/operator name:	LES RANDOLPH
Owner/operator address:	4468 BROCKTON AVE RIVERSIDE, CA 92501
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 682-7104
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Violation Status: No violations found

FINDS:

Registry ID: 110002938091

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

BROCKTON AUTO CLINIC (Continued) **1004675600**

corrective action activities required under RCRA.

A5
NE
< 1/8
0.003 mi.
18 ft.

TIP TOP LAUNDRY
4407 BROCKTON AVE
RIVERSIDE, CA

EDR US Hist Cleaners **1009145778**
N/A

Site 5 of 16 in cluster A

Relative:
Higher

Actual:
800 ft.

EDR Historical Cleaners:

Name:	TIP TOP LAUNDRY CO
Year:	1930
Type:	LAUNDRIES STEAM
Name:	TIP TOP LAUNDRY
Year:	1936
Type:	FAMILY LAUNDRY WORK
Name:	TIP TOP LAUNDRY
Year:	1936
Type:	LACE AND LACE CURTAIN CLEANERS
Name:	TIP TOP LAUNDRY
Year:	1936
Type:	LAUNDRIES
Name:	TIP TOP LAUNDRY
Year:	1939
Type:	FAMILY LAUNDRY WORK
Name:	TIP TOP LAUNDRY
Year:	1951
Type:	LAUNDRIES

B6
NNE
< 1/8
0.003 mi.
18 ft.

DIAGNOSTIC BREAST IMAGING CTR
4500 BROCKTON AVE STE 219
RIVERSIDE, CA 92501

RCRA-SQG **1000905007**
FINDS **CA0000259804**
HAZNET

Site 1 of 2 in cluster B

Relative:
Higher

Actual:
797 ft.

RCRA-SQG:

Date form received by agency:	04/13/1994
Facility name:	DIAGNOSTIC BREAST IMAGING CTR
Facility address:	4500 BROCKTON AVE STE 219 RIVERSIDE, CA 92501
EPA ID:	CA0000259804
Mailing address:	CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Contact:	JOAN DALTON
Contact address:	1660 CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Contact country:	US
Contact telephone:	(909) 276-7550
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator

DIAGNOSTIC BREAST IMAGING CTR (Continued) **1000905007**

Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	COMPUTERIZED DIAGNOSTIC IMAGING
Owner/operator address:	1660 CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 781-2270
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002616125

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Year:	1998
Gepaid:	CA0000259804
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4500 BROCKTON AVE STE 219

DIAGNOSTIC BREAST IMAGING CTR (Continued) **1000905007**

Mailing City,St,Zip: RIVERSIDE, CA 925072031
Gen County: Not reported
TSD EPA ID: CAD983604000
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0879
Facility County: Riverside

Year: 1997
Gepaid: CA0000259804
Contact: COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone: 9097812270
Mailing Name: Not reported
Mailing Address: 4500 BROCKTON AVE STE 219
Mailing City,St,Zip: RIVERSIDE, CA 925072031
Gen County: Not reported
TSD EPA ID: CAD983604000
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0889
Facility County: Riverside

Year: 1996
Gepaid: CA0000259804
Contact: COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone: 9097812270
Mailing Name: Not reported
Mailing Address: 4500 BROCKTON AVE STE 219
Mailing City,St,Zip: RIVERSIDE, CA 925072031
Gen County: Not reported
TSD EPA ID: CAD983604000
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Not reported
Tons: .0437
Facility County: Riverside

Year: 1996
Gepaid: CA0000259804
Contact: COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone: 9097812270
Mailing Name: Not reported
Mailing Address: 4500 BROCKTON AVE STE 219
Mailing City,St,Zip: RIVERSIDE, CA 925072031
Gen County: Not reported
TSD EPA ID: CAD983604000
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0437
Facility County: Riverside

Year: 1995
Gepaid: CA0000259804
Contact: COMPUTERIZED DIAGNOSTIC IMAGIN

DIAGNOSTIC BREAST IMAGING CTR (Continued) **1000905007**

Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4500 BROCKTON AVE STE 219
Mailing City,St,Zip:	RIVERSIDE, CA 925072031
Gen County:	Not reported
TSD EPA ID:	CAD982524613
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0417
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

A7 **ACME CURTAIN LAUNDRY** **EDR US Hist Cleaners** **1009145773**
NE **4435 BROCKTON AVE** **N/A**
< 1/8 **RIVERSIDE, CA**
0.004 mi.
19 ft. **Site 6 of 16 in cluster A**

Relative:
Higher

Actual:
798 ft.

EDR Historical Cleaners:

Name:	ACME CURTAIN LAUNDRY
Year:	1951
Type:	LAUNDRIES
Name:	TINY TOT LAUNDRY
Year:	1951
Type:	LAUNDRIES

A8 **CLINES AUTO BODY** **RCRA-SQG** **1000313704**
NNE **4491 BROOKTON AVE** **FINDS** **CAD982031510**
< 1/8 **RIVERSIDE, CA 92501**
0.004 mi.
21 ft. **Site 7 of 16 in cluster A**

Relative:
Higher

Actual:
797 ft.

RCRA-SQG:

Date form received by agency:	08/25/1987
Facility name:	CLINES AUTO BODY
Facility address:	4491 BROOKTON AVE RIVERSIDE, CA 92501
EPA ID:	CAD982031510
Mailing address:	BROOKTON AVE RIVERSIDE, CA 92501
Contact:	ENVIRONMENTAL MANAGER
Contact address:	4491 BROOKTON AVE RIVERSIDE, CA 92501
Contact country:	US
Contact telephone:	(714) 369-9109
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of

CLINES AUTO BODY (Continued) **1000313704**

hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JOHN CLINE JR
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002783159

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A9 NNE < 1/8 0.005 mi. 26 ft. | **?** | **HIST UST** | **U001576254** / **N/A**

4481 BROCKTON AVE
RIVERSIDE, CA 92501

Site 8 of 16 in cluster A

Relative: Higher

Actual: 797 ft.

HIST UST:

Region:	STATE
Facility ID:	00000013283
Facility Type:	Not reported
Other Type:	BULK PLANT
Total Tanks:	0002
Contact Name:	GLEN W. CAMPBELL
Telephone:	7146861676
Owner Name:	CAMPBELL OIL COMPANY
Owner Address:	3010 11TH ST.
Owner City,St,Zip:	RIVERSIDE, CA 92507
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	1951
Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

A10 NNE < 1/8 0.005 mi. 26 ft. | **BUD & HARRY S FRIENDLY SERVICE** | **EDR US Hist Auto Stat** | **1009022035** / **N/A**

4481 BROCKTON AVE
RIVERSIDE, CA

Site 9 of 16 in cluster A

Relative: Higher

Actual: 797 ft.

EDR Historical Auto Stations:

Name:	BUD & HARRY S FRIENDLY SERVICE
Year:	1951
Type:	GASOLINE STATIONS
Name:	BECKMANS AUTO REPAIR
Year:	2002
Address:	4481 BROCKTON AVE

A11
NNE
< 1/8
0.005 mi.
26 ft.

BUD & HARRY'S SERVICE
4481 BROCKTON AVE
RIVERSIDE, CA 92501

HIST UST **U001576260**
N/A

Site 10 of 16 in cluster A

Relative:
Higher

Actual:
797 ft.

HIST UST:

Region:	STATE
Facility ID:	00000013284
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0003
Contact Name:	HARRY L. STEVENS
Telephone:	7146832100
Owner Name:	CAMPBELL OIL COMPANY
Owner Address:	3010 11TH ST.
Owner City,St,Zip:	RIVERSIDE, CA 92507
Tank Num:	001
Container Num:	1
Year Installed:	1972
Tank Capacity:	00005000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	1979
Tank Capacity:	00004000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	1 3
Year Installed:	1972
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

A12
NNE
< 1/8
0.005 mi.
26 ft.

4489 BROCKTON AVE
RIVERSIDE, CA 92501

EDR US Hist Auto Stat **1009021751**
N/A

Site 11 of 16 in cluster A

Relative:
Higher

Actual:
797 ft.

EDR Historical Auto Stations:

Name:	GRASER 0 R
Year:	1930
Type:	AUTO REPAIRING
Name:	EDDIES AUTO BODY & PAINT
Year:	1999
Address:	4489 BROCKTON AVE

(Continued) **1009021751**

Name: EDDIES AUTO BODY & PAINT
Year: 2000
Address: 4489 BROCKTON AVE

Name: BECKMANS AUTO REPAIR
Year: 2001
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2002
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2003
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY
Year: 2004
Address: 4489 BROCKTON AVE

Name: EDDIE FISHERS AUTO COLLISION CENTER
Year: 2005
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2006
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2007
Address: 4489 BROCKTON AVE

Name: EDDIES AUTO BODY & PAINT
Year: 2008
Address: 4489 BROCKTON AVE

A13 **BRITISH SPORTS AND IMPORTS** **RCRA-SQG** **1001967626**
NNE **4489 BROCKTON AVE** **FINDS** **CAR000071290**
< 1/8 **RIVERSIDE, CA 92501** **HAZNET**
0.005 mi.
26 ft. **Site 12 of 16 in cluster A**

Relative:
Higher

Actual:
797 ft.

RCRA-SQG:
Date form received by agency: 04/20/2000
Facility name: BRITISH SPORTS AND IMPORTS
Facility address: 4489 BROCKTON AVE
RIVERSIDE, CA 92501
EPA ID: CAR000071290
Contact: THOMAS SHANLEY
Contact address: 4489 BROCKTON AVE
RIVERSIDE, CA 92501
Contact country: US
Contact telephone: (909) 781-0577
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of

BRITISH SPORTS AND IMPORTS (Continued) **1001967626**

hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	THOMAS STANLEY
Owner/operator address:	4489 BROCKTON AVE RIVERSIDE, CA 92501
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 781-0577
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D039
Waste name:	TETRACHLOROETHYLENE
Violation Status:	No violations found

FINDS:

Registry ID: 110002935799

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

BRITISH SPORTS AND IMPORTS (Continued) **1001967626**

corrective action activities required under RCRA.

HAZNET:

Year:	2003
Gepaid:	CAR000071290
Contact:	ENVIRONMENTAL MANAGER
Telephone:	Not reported
Mailing Name:	Not reported
Mailing Address:	4481 BROCKTON AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925010000
Gen County:	Not reported
TSD EPA ID:	CAT000613927
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.22
Facility County:	Riverside

Year:	2002
Gepaid:	CAR000071290
Contact:	ENVIRONMENTAL MANAGER
Telephone:	Not reported
Mailing Name:	Not reported
Mailing Address:	4481 BROCKTON AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925010000
Gen County:	Not reported
TSD EPA ID:	CAT000613927
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.22
Facility County:	Riverside

Year:	2001
Gepaid:	CAR000071290
Contact:	ENVIRONMENTAL MANAGER
Telephone:	Not reported
Mailing Name:	Not reported
Mailing Address:	4481 BROCKTON AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925010000
Gen County:	Not reported
TSD EPA ID:	CAT000613927
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Transfer Station
Tons:	0
Facility County:	Riverside

Year:	2001
Gepaid:	CAR000071290
Contact:	ENVIRONMENTAL MANAGER
Telephone:	Not reported
Mailing Name:	Not reported
Mailing Address:	4481 BROCKTON AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925010000
Gen County:	Not reported

BRITISH SPORTS AND IMPORTS (Continued) **1001967626**

TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.15
Facility County:	Riverside

Year:	2001
Gepaid:	CAR000071290
Contact:	ENVIRONMENTAL MANAGER
Telephone:	Not reported
Mailing Name:	Not reported
Mailing Address:	4481 BROCKTON AVE
Mailing City,St,Zip:	RIVERSIDE, CA 925010000
Gen County:	Not reported
TSD EPA ID:	CAT000613927
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.15
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

A14 **PRESS ENTERPRISE GARAGE** **HIST UST** **U001576283**
NNE **4491 BROCKTON AVE** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.005 mi.
27 ft. **Site 13 of 16 in cluster A**

Relative:
Higher

Actual:
797 ft.

HIST UST:

Region:	STATE
Facility ID:	00000001676
Facility Type:	Other
Other Type:	FLEET MAINTENANCE
Total Tanks:	0006
Contact Name:	LARRY PEARSON
Telephone:	7146866338
Owner Name:	CAMPBELL OIL CO.
Owner Address:	3010 11TH ST.
Owner City,St,Zip:	RIVERSIDE, CA 92507

Tank Num:	001
Container Num:	5
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	Not reported
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	None

Tank Num:	002
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	WASTE
Type of Fuel:	06

PRESS ENTERPRISE GARAGE (Continued) **U001576283**

Tank Construction: Not reported
Leak Detection: None

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00004000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: None

Tank Num: 005
Container Num: 6
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

Tank Num: 006
Container Num: 7
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: None

A15 **CAMPBELL OIL COMPANY** **HIST CORTESE** **S101300552**
NNE **4491** **LUST** **N/A**
< 1/8 **RIVERSIDE, CA 92501**
0.005 mi.
27 ft. **Site 14 of 16 in cluster A**

Relative:
Higher

Actual:
797 ft.

CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 083300084T

LUST REG 8:
Region: 8
County: Riverside
Regional Board: Santa Ana Region
Facility Status: Remediation Plan
Case Number: 083300084T

CAMPBELL OIL COMPANY (Continued) **S101300552**

Local Case Num:	88087
Case Type:	Aquifer affected
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	14TH
Enf Type:	SI
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	Corrosion
Leak Source:	Tank
Global ID:	T0606500008
How Stopped Date:	10/30/1986
Enter Date:	5/20/1987
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	10/30/1986
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	3/4/1997
Pollution Char:	6/3/1999
Remed Plan:	12/20/1999
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	5/20/1987
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9774371
Longitude:	-117.3843255
MTBE Date:	2/4/2000
Max MTBE GW:	600
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	B
Staff:	VJJ
Staff Initials:	UNK
Lead Agency:	Regional Board
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	LETTER DRAFTED 6 MONTHS AGO, REGARDING STATUS, REPORT. SAMPLED WELL ON 8/12/96 - FREE PRODUCT. FURTHER INVEST REQUIRED.

A16 NNE < 1/8 0.005 mi. 27 ft. | **CAMPBELL OIL**
4491 BROCKTON AVE
RIVERSIDE, CA

Site 15 of 16 in cluster A

LUST | **S108746749**
N/A

Relative: Higher

Actual: 797 ft.

LUST:

Region:	STATE
Global Id:	T0606500008
Latitude:	33.9773887859262
Longitude:	-117.385160923004
Case Type:	LUST Cleanup Site
Status:	Open - Assessment & Interim Remedial Action
Status Date:	11/26/2012
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	VJB
Local Agency:	Not reported
RB Case Number:	083300084T
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Historic LPH/high BTEX, no Mtbe. Site not fully characterized. VES proposed/approved years ago, but delayed implementation to date. RP recalcitrant/uncooperative. Site slated for purchase/redevelopment as medical bldg, but developer is alo uncooperative.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500008
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Regulatory Activities:

Global Id:	T0606500008
Action Type:	ENFORCEMENT
Date:	08/04/2004
Action:	File review
Global Id:	T0606500008
Action Type:	ENFORCEMENT
Date:	07/13/2004
Action:	Meeting
Global Id:	T0606500008
Action Type:	ENFORCEMENT
Date:	08/30/2005
Action:	File review
Global Id:	T0606500008
Action Type:	ENFORCEMENT
Date:	08/31/2005
Action:	* Verbal Communication

CAMPBELL OIL (Continued) **S108746749**

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/11/2005
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/02/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/02/2007
Action: * Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 10/16/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/14/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/13/2004
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/21/2005
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/16/2007
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 06/21/2005
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/27/2004
Action: File review

Global Id: T0606500008
Action Type: RESPONSE
Date: 04/06/2010
Action: Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT

CAMPBELL OIL (Continued) **S108746749**

Date: 07/28/2005
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/25/2005
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 05/06/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 05/03/2010
Action: Meeting

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 03/29/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/16/2009
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/14/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: RESPONSE
Date: 07/30/2005
Action: CAP/RAP - Feasibility Study Report

Global Id: T0606500008
Action Type: RESPONSE
Date: 02/15/2006
Action: Other Report / Document

Global Id: T0606500008
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/06/1987
Action: Referral to Regional Board

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/22/2010
Action: Verbal Enforcement

CAMPBELL OIL (Continued) **S108746749**

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/23/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 02/09/2006
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/30/2003
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/26/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 06/02/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/14/2010
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 01/05/2006
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 01/10/2006
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/05/2007
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/13/2007
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/18/2007
Action: * Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE

CAMPBELL OIL (Continued) **S108746749**

Date: 10/22/2008
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 01/05/2006
Action: Remedial Progress Report

Global Id: T0606500008
Action Type: RESPONSE
Date: 01/10/2006
Action: Other Report / Document

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/04/2006
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500008
Action Type: RESPONSE
Date: 04/30/2004
Action: Soil and Water Investigation Report

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/14/2009
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 05/12/2011
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 12/05/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 12/12/2012
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: RESPONSE
Date: 08/31/2003
Action: Other Workplan

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/24/2009
Action: Verbal Communication

CAMPBELL OIL (Continued) **S108746749**

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606500008
Action Type: RESPONSE
Date: 08/04/2004
Action: Other Report / Document

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2004
Action: Remedial Progress Report

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/03/2003
Action: * No Action

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/16/2002
Action: * No Action

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/13/2003
Action: Staff Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 05/23/2012
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 06/01/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/26/2005
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 12/08/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT

CAMPBELL OIL (Continued) **S108746749**

Date: 01/06/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/24/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 04/01/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/07/2009
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500008
Action Type: RESPONSE
Date: 11/26/2012
Action: Other Report / Document

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/21/2003
Action: * No Action

Global Id: T0606500008
Action Type: RESPONSE
Date: 03/03/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 11/06/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 06/15/2008
Action: Remedial Progress Report

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/21/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 06/10/2008
Action: Site Visit / Inspection / Sampling

CAMPBELL OIL (Continued) **S108746749**

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/21/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/02/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 07/24/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 10/17/2006
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/21/2005
Action: File review

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/10/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0606500008
Action Type: REMEDIATION
Date: 01/01/1950
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/22/2009
Action: Warning Letter

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 11/05/2009
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: RESPONSE
Date: 06/01/2010
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE

CAMPBELL OIL (Continued) **S108746749**

Date: 09/29/2009
Action: Verbal Communication

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606500008
Action Type: RESPONSE
Date: 09/30/2005
Action: Remedial Progress Report

Global Id: T0606500008
Action Type: RESPONSE
Date: 08/31/2005
Action: Other Report / Document

Global Id: T0606500008
Action Type: RESPONSE
Date: 08/31/2005
Action: Other Report / Document

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 08/16/2006
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/22/2005
Action: * Verbal Communication

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 09/30/2008
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 02/26/2009
Action: Verbal Enforcement

Global Id: T0606500008
Action Type: ENFORCEMENT
Date: 01/22/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606500008
Action Type: RESPONSE
Date: 07/01/2003
Action: Monitoring Report - Quarterly

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 88087

CAMPBELL OIL (Continued) **S108746749**

Employee: Bunchek
Site Closed: Referred to Water Board
Case Type: Ground water
Facility Status: 0

A17
NNE
< 1/8
0.005 mi.
27 ft.

4491 BROCKTON AVE
RIVERSIDE, CA 92501

Site 16 of 16 in cluster A

EDR US Hist Auto Stat **1015501089**
N/A

Relative:
Higher

Actual:
797 ft.

EDR Historical Auto Stations:
Name: EDDIES AUTO BODY
Year: 2006
Address: 4491 BROCKTON AVE

18
West
< 1/8
0.007 mi.
35 ft.

COMPUTERIZED DIAGNOSTIC IMAGIN
4646 BROCKTON AVE
RIVERSIDE, CA 92506

RCRA-SQG **1001126624**
FINDS **CAR000016899**
HAZNET

Relative:
Higher

Actual:
811 ft.

RCRA-SQG:
Date form received by agency: 12/16/1996
Facility name: COMPUTERIZED DIAGNOSTIC IMAGIN
Facility address: 4646 BROCKTON AVE
RIVERSIDE, CA 92506
EPA ID: CAR000016899
Mailing address: 14TH ST STE 109
RIVERSIDE, CA 92501
Contact: DENISE LESLIE
Contact address: 4000 14TH ST STE 109
RIVERSIDE, CA 92501
Contact country: US
Contact telephone: (909) 276-7500
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: COMPUTERIZED DIAGNOSTIC IMAGIN
Owner/operator address: 2020 IOWA AVE STE A 103
RIVERSIDE, CA 92507
Owner/operator country: Not reported
Owner/operator telephone: (909) 781-2270
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

COMPUTERIZED DIAGNOSTIC IMAGIN (Continued) **1001126624**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002915383

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Year:	2001
Gepaid:	CAR000016899
Contact:	DENISE LESLIE DIRECTOR IMG SER
Telephone:	9092767500
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	0.45
Facility County:	Riverside

Year:	2000
Gepaid:	CAR000016899
Contact:	DENISE LESLIE DIRECTOR IMG SER
Telephone:	9092767500
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD981402522

COMPUTERIZED DIAGNOSTIC IMAGIN (Continued) **1001126624**

TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	0.45
Facility County:	Riverside

Year:	2000
Gepaid:	CAR000016899
Contact:	DENISE LESLIE DIRECTOR IMG SER
Telephone:	9092767500
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	0.45
Facility County:	Riverside

Year:	1999
Gepaid:	CAR000016899
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	1.8553
Facility County:	Riverside

Year:	1998
Gepaid:	CAR000016899
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE 109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	1.5427
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

B19 NNE < 1/8 0.044 mi. 231 ft. | **RIVERSIDE LAUNDRY** | **EDR US Hist Cleaners** | **1009145776**
4459 BROCKTON AVE | **N/A**
RIVERSIDE, CA

Site 2 of 2 in cluster B

Relative: Higher

Actual: 798 ft.

EDR Historical Cleaners:

Name:	RIVERSIDE LAUNDRY
Year:	1930
Type:	LAUNDRIES STEAM
Name:	RIVERSIDE LAUNDRY
Year:	1936
Type:	LAUNDRIES
Name:	RIVERSIDE LAUNDRY & DRY CLEANERS
Year:	1951
Type:	LAUNDRIES

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20 ENE < 1/8 0.103 mi. 544 ft. | **COMPUTERIZED DIAGNOSTIC IMAGING** | **RCRA-SQG** | **1000905002**
4000 14TH ST | **FINDS** | **CA0000254466**
RIVERSIDE, CA 92501 | **HAZNET**

Relative: Higher

Actual: 825 ft.

RCRA-SQG:

Date form received by agency:	04/13/1994
Facility name:	COMPUTERIZED DIAGNOSTIC IMAGING
Facility address:	4000 14TH ST RIVERSIDE, CA 92501
EPA ID:	CA0000254466
Mailing address:	CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Contact:	DENISE LESLIE
Contact address:	1660 CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Contact country:	US
Contact telephone:	(909) 276-7500
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	COMPUTERIZED DIAGNOSTIC IMAGING
Owner/operator address:	1660 CHICAGO AVE STE N15 RIVERSIDE, CA 92507
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 781-2270
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

COMPUTERIZED DIAGNOSTIC IMAGING (Continued) **1000905002**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002616081

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Year:	1998
Gepaid:	CA0000254466
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.3800
Facility County:	Riverside

Year:	1997
Gepaid:	CA0000254466
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270

COMPUTERIZED DIAGNOSTIC IMAGING (Continued) **1000905002**

Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.2662
Facility County:	Riverside

Year:	1996
Gepaid:	CA0000254466
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.3000
Facility County:	Riverside

Year:	1995
Gepaid:	CA0000254466
Contact:	COMPUTERIZED DIAGNOSTIC IMAGIN
Telephone:	9097812270
Mailing Name:	Not reported
Mailing Address:	4000 14TH ST STE109
Mailing City,St,Zip:	RIVERSIDE, CA 925014009
Gen County:	Not reported
TSD EPA ID:	CAD983604000
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0948
Facility County:	Riverside

C21 **COUNTY OFFICE OF EDUCATION** **CA FID UST** **S101589939**
ENE **3939 13TH ST** **SWEEPS UST** **N/A**
< 1/8 **RIVERSIDE, CA 92502**
0.111 mi.
584 ft. **Site 1 of 3 in cluster C**

Relative:
Higher

Actual:
820 ft.

CA FID UST:

Facility ID:	33001444
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7147886553
Mail To:	Not reported
Mailing Address:	P O BOX 868
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 92502

COUNTY OFFICE OF EDUCATION (Continued) **S101589939**

Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 65444
Number: 5
Board Of Equalization: Not reported
Referral Date: 11-18-92
Action Date: 11-18-92
Created Date: 10-07-91
Tank Status: A
Owner Tank Id: 1
Swrcb Tank Id: 33-000-065444-000001
Actv Date: 11-18-92
Capacity: 500
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: 1

C22
ENE
< 1/8
0.111 mi.
584 ft.

RIVERSIDE COUNTY OFFICE OF EDUCATION **UST** **U003803312**
3939 13TH ST **N/A**
RIVERSIDE, CA 92501

Site 2 of 3 in cluster C

Relative:
Higher

Actual:
820 ft.

UST:
Facility ID: 642
Latitude: 33.97847
Longitude: -117.38059

RIVERSIDE CO. UST:
Region: RIVERSIDE
Total Tanks: 1

D23
North
1/8-1/4
0.139 mi.
734 ft.

ASSOCIATED NATIONAL MORTGAGE **LUST** **S101300563**
4279 EL DORADO ST **N/A**
RIVERSIDE, CA 92501

Site 1 of 4 in cluster D

Relative:
Higher

Actual:
832 ft.

LUST REG 8:
Region: 8
County: Riverside
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083301365T
Local Case Num: 88887
Case Type: Soil only

ASSOCIATED NATIONAL MORTGAGE (Continued) **S101300563**

Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Vapor Extraction
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0606500165
How Stopped Date:	Not reported
Enter Date:	12/6/1989
Review Date:	Not reported
Prelim Assess:	12/7/1989
Discover Date:	Not reported
Enforcement Date:	Not reported
Close Date:	9/5/1995
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	6/10/1992
Monitoring:	Not reported
Enter Date:	12/6/1989
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.979792
Longitude:	-117.3845916
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	RS
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

D24 North 1/8-1/4 0.139 mi. 734 ft. | **ASSOCIATED NATIONAL MORTG**
4279 EL DORADO
RIVERDALE, CA 92501

HIST CORTESE **S105025873**
LUST **N/A**

Site 2 of 4 in cluster D

Relative: Higher

Actual: 832 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083301365T

LUST:

Region:	STATE
Global Id:	T0606500165
Latitude:	33.979999
Longitude:	-117.384544
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/05/1995
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	SCB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083301365T
LOC Case Number:	88887
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500165
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	sbolting@rivcocha.org
Phone Number:	9519558982

Global Id:	T0606500165
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375

Regulatory Activities:

Global Id:	T0606500165
Action Type:	ENFORCEMENT
Date:	09/04/1995
Action:	File review - #RCDEH Upload Site File 4/5/2010

Global Id:	T0606500165
Action Type:	Other

ASSOCIATED NATIONAL MORTG (Continued) **S105025873**

Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0606500165
Action Type:	ENFORCEMENT
Date:	09/05/1995
Action:	Closure/No Further Action Letter - #RCDEH0905
Global Id:	T0606500165
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	88887
Employee:	Boltinghous-LOP
Site Closed:	Yes
Case Type:	Soil only
Facility Status:	closed/action completed

C25 **3874 13TH** **US BROWNFIELDS** **1010698682**
ENE **3874 13TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.149 mi.
786 ft. **Site 3 of 3 in cluster C**

Relative:
Higher

Actual:
823 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3874 13TH
Property #:	215271002
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.977918
Longitude:	-117.379842
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64996
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment

3874 13TH (Continued) **1010698682**

Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Riverside County Board of Education
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported

3874 13TH (Continued) **1010698682**

Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717387

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

E26 **3858 13TH** **US BROWNFIELDS** **1010698683**
ENE **3858 13TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.159 mi.
839 ft. **Site 1 of 17 in cluster E**

Relative:
Higher

Actual:
826 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3858 13TH
Property #:	215271003
Parcel size:	0.19
Property Description:	Commercial
Latitude:	33.977848
Longitude:	-117.379693
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64997
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Riverside County Board of Education
Did owner change:	Not reported

3858 13TH (Continued) **1010698683**

Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported

3858 13TH (Continued) **1010698683**

Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717396

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F27 **3785 14TH** **US BROWNFIELDS** **1010695933**
ENE **3785 14TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.161 mi.
850 ft. **Site 1 of 25 in cluster F**

Relative:
Higher

Actual:
828 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3785 14TH
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976742
Longitude:	-117.379292
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65042
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported

3785 14TH (Continued) **1010695933**

IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717831

3785 14TH (Continued) **1010695933**

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F28 **3781 14TH** **US BROWNFIELDS** **1010695932**
ENE **3781 14TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.162 mi.
855 ft. **Site 2 of 25 in cluster F**

Relative:
Higher

Actual:
828 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3781 14TH
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976724
Longitude:	-117.379253
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65041
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported

3781 14TH (Continued) **1010695932**

State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717822

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F29 ENE 1/8-1/4 0.162 mi. 858 ft.

3779 14TH
3779 14TH
RIVERSIDE, CA 92501

Site 3 of 25 in cluster F

US BROWNFIELDS FINDS

1010695931
N/A

Relative: Higher

Actual: 828 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3779 14TH
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976715
Longitude:	-117.379234
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65040
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3779 14TH (Continued) **1010695931**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717813

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F30 ENE 1/8-1/4 0.163 mi. 862 ft. | **3775 14TH**
3775 14TH
RIVERSIDE, CA 92501

Site 4 of 25 in cluster F

US BROWNFIELDS FINDS | **1010695930 N/A**

Relative: Higher

Actual: 829 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3775 14TH
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976697
Longitude:	-117.379195
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65039
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3775 14TH (Continued) **1010695930**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717804

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F31 ENE 1/8-1/4 0.165 mi. 871 ft. | **REEVES REPAIR SERVICE** | **EDR US Hist Auto Stat** | **1009022017** | **N/A**
3769 14TH ST
RIVERSIDE, CA

Site 5 of 25 in cluster F

Relative: Higher

Actual: 829 ft.

EDR Historical Auto Stations:

Name:	REEVES REPAIR SERVICE
Year:	1951
Type:	AUTOMOBILE REPAIRING

D32 North 1/8-1/4 0.174 mi. 921 ft. | **RIVERSIDE MONUMENTAL CO.** | **HIST UST** | **U001576288** | **N/A**
4291 CEDAR ST
RIVERSIDE, CA 92501

Site 3 of 4 in cluster D

Relative: Higher

Actual: 833 ft.

HIST UST:

Region:	STATE
Facility ID:	00000051747
Facility Type:	Other
Other Type:	MONUMENT DEALER
Total Tanks:	0001
Contact Name:	DOROTHY A. HAGEN
Telephone:	7146832864
Owner Name:	RIVERSIDE MONUMENTAL CO.
Owner Address:	4291 CEDAR STREET
Owner City,St,Zip:	RIVERSIDE, CA 92501
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000500
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	None

D33 North 1/8-1/4 0.174 mi. 921 ft. | **RIVERSIDE MONUMENTAL COMPANY** | **HIST UST** | **U001576289** | **N/A**
4291 CEDAR ST
RIVERSIDE, CA 92501

Site 4 of 4 in cluster D

Relative: Higher

Actual: 833 ft.

HIST UST:

Region:	STATE
Facility ID:	00000064677
Facility Type:	Other
Other Type:	MONUMENT DEALER
Total Tanks:	0001
Contact Name:	DOROTHY A. HAGEN
Telephone:	7146832864
Owner Name:	RIVERSIDE MONUMENTAL COMPANY
Owner Address:	4291 CEDAR STREET
Owner City,St,Zip:	RIVERSIDE, CA 92501
Tank Num:	001
Container Num:	1

RIVERSIDE MONUMENTAL COMPANY (Continued) **U001576289**

Year Installed:	Not reported
Tank Capacity:	00000500
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

F34 **OLINJIES COUNTY CLINIC** **EDR US Hist Cleaners** **1009143321**
ENE **3810 14TH ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.177 mi.
937 ft. **Site 6 of 25 in cluster F**

Relative:
Higher

Actual:
830 ft.

EDR Historical Cleaners:

Name:	OLINJIES COUNTY CLINIC
Year:	1939
Type:	CLEANERS CTPOLSTERY

F35 **THRIFTY OIL #343/ ARCO #9713** **LUST** **S103587826**
ENE **4395 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.182 mi.
962 ft. **Site 7 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Preliminary site assessment underway
Case Number:	083303275T
Local Case Num:	980442
Case Type:	Aquifer affected
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	14TH
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0606500543
How Stopped Date:	Not reported
Enter Date:	11/5/1998
Review Date:	Not reported
Prelim Assess:	7/3/1997
Discover Date:	12/29/1998
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	11/5/1998

THRIFTY OIL #343/ ARCO #9713 (Continued) **S103587826**

GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9767991
Longitude:	-117.3795643
MTBE Date:	12/26/2002
Max MTBE GW:	2480
MTBE Concentration:	1
Max MTBE Soil:	53
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	B
Staff:	VJJ
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

F36 **ARCO #9713** **UST** **U003839087**
ENE **4395 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.182 mi.
962 ft. **Site 8 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

UST:

Facility ID:	66
Latitude:	33.97679
Longitude:	-117.37964

RIVERSIDE CO. UST:

Region:	RIVERSIDE
Total Tanks:	3

F37 **LUST** **S100279602**
ENE **4395 MARKET** **CHMIRS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.182 mi.
962 ft. **Site 9 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

LUST:

Region:	STATE
Global Id:	T0606500543
Latitude:	33.97703091
Longitude:	-117.379738123
Case Type:	LUST Cleanup Site
Status:	Open - Remediation
Status Date:	07/01/1998
Lead Agency:	RIVERSIDE COUNTY LOP

(Continued) **S100279602**

Case Worker: YR
Local Agency: RIVERSIDE COUNTY LOP
RB Case Number: 083303275T
LOC Case Number: 980442
File Location: Local Agency
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Unauthorized release of fuel hydrocarbon was first identified during initial site investigation in 1997. Additional site assessment activities since then have characterized its constituents and its lateral and vertical distribution beneath the site. In March 1998, the USTs and all the associated fuel pipings were replaced with new dual-walled fiberglass, effectively eliminating/reducing any potential new release to the soil. In July 1997, eight 10 to 85-foot soil borings (TDD- 1 through TDD-8) were drilled and converted two of the borings (TDD- 1 and TDD-2) into groundwater monitoring wells. Groundwater was measured at approximately 75 feet bgs. Results of soil samples analysis indicated TPHg concentrations ranging from non-detectable (ND) to 6,900 mgkg (TDD-2-20), benzene concentrations ranging from ND to 5.1 mgkg (TDD-2-20), and MTBE concentrations ranging from ND to 20 mg/kg (TDD-7-5). Results of groundwater samples analysis indicated that sample from TDD- 1 contained 26,000 ppb TPHg and 490 ppb benzene, while sample from TDD-2 contained 37,000 ppb TPHg and 600 ppb benzene. In March 1998, three underground storage tanks (USTs) and associated piping were removed from the site and replaced with two new double-walled USTs. Laboratory analysis of soil samples collected during excavation activities detected TPHg, benzene, and MTBE at concentrations up to 23,000 mg/kg, 140 mgkg, and 390 mgkg, respectively. As an interim remedial action, approximately 1,493.3 1 tons of hydrocarbon-impacted soil were transportedoff-site for treatment and recycling. In March 1999, six soil borings (TOC- 1 1 through TOC- 16) were drilled each to a depth of 70 feet bgs. Groundwater was encountered at approximately 60 feet bgs. Analysis of soil samples detected TPHg in borings TOC-15 and TOC-16 at concentrations ranging from ND to 4,900 mg/kg (TOC-16-15). Benzene was detected in the soil samples from borings TOC- 12, TOC- 14, TOC- 1 5, and TOC- 16 at concentrations ranging from ND to 43 mg/kg (TOC-16-50). MTBE was detected in soil samples from borings TOC-12, TOC-14, and TOC-15 at concentrations ranging from ND to 7 mg/kg (TOC-15-20). Groundwater samples analysis indicated TPHg concentrations ranging from 210 ppb (TOC- 13) to 1 1,000 ppb (TOC- 14), benzene concentrations ranging from 17 ppb (TOC- 1 1) to 2,500 ppb (TOC- 12), and MTBE concentrations ranging from ND to 590 ppb (TOC-12). In June 2000, four borings (TOC-17 through TOC-20) were drilled to depths ranging from 75.5 to 78.5 feet bgs. Two of the borings (TOC-17 and TOC- 18) were converted into groundwater monitoring wells. Laboratory analysis of the soil samples detected TPHg at concentrations ranging from ND to 3,000 mg/kg (TOC-18-75). Benzene was detected in only one soil sample at concentration of 0.09 mg/kg (TOC-20-70), while MTBE was not detected in any soil samples. Results of groundwater samples analysis indicated TPHg concentration in only one water sample collected from TOC-18 (11,600 ppb). Benzene and MTBE were not detected in the groundwater samples from wells TOC-17 and TOC-18. In October 2001, 3 off-site groundwater monitoring wells (TOC-2 1, through TOC-23) and 3 on-site multiple completion vapor wells (VW-1 through VW-3) were installed. TPHg was detected at concentrations up to 25,000 mg/kg, benzene at concentrations up to

(Continued) **S100279602**

7.3 1 mg/kg, and MTBE at concentrations up to 2.78 mg/kg. Groundwater in the new wells detected up to 2 1,300 ppb TPHg, 247 ppb benzene, and 14 ppb MTBE. In November 2001, a SVE pilot test was conducted using each casings from the vapor wells VW-1, VW-2, and VW-3 as individual recovery points. SVE test indicated that additional vapor wells are needed to remediate the shallow vadose zone (up to 50 feet bgs). In November 2003 two 4-hour AS/SVE pilot tests and a 24-hour VE test were conducted. Between December 2003 and June 2004, three 5-day events of SVE and one 5-day event of Dual Phase Extraction (DPE) were conducted. In March 2007, the DPE s

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500543
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Global Id:	T0606500543
Contact Type:	Local Agency Caseworker
Contact Name:	ANDREA BRIONES
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	abriones@rivcocha.org
Phone Number:	9519558982

Regulatory Activities:

Global Id:	T0606500543
Action Type:	ENFORCEMENT
Date:	08/20/2012
Action:	Staff Letter - #RCDEH#082012

Global Id:	T0606500543
Action Type:	RESPONSE
Date:	04/15/2007
Action:	Monitoring Report - Quarterly

Global Id:	T0606500543
Action Type:	RESPONSE
Date:	10/15/2007
Action:	Monitoring Report - Quarterly

Global Id:	T0606500543
Action Type:	RESPONSE
Date:	04/15/2008
Action:	Monitoring Report - Quarterly

Global Id:	T0606500543
Action Type:	RESPONSE
Date:	07/15/2008
Action:	Monitoring Report - Quarterly

(Continued) **S100279602**

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 03/15/2012
Action: Staff Letter - #RCDEH031512

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 07/11/2011
Action: Staff Letter - #RCDEH071111

Global Id: T0606500543
Action Type: RESPONSE
Date: 02/18/2010
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2011
Action: Monitoring Report - Annually

Global Id: T0606500543
Action Type: RESPONSE

(Continued) **S100279602**

Date: 01/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2010
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 09/01/2011
Action: Other Workplan

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 02/28/2012
Action: Site Assessment Report

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2012
Action: Monitoring Report - Quarterly

(Continued) **S100279602**

Global Id: T0606500543
Action Type: RESPONSE
Date: 12/02/2009
Action: Other Report / Document

Global Id: T0606500543
Action Type: RESPONSE
Date: 08/22/2011
Action: Correspondence

Global Id: T0606500543
Action Type: RESPONSE
Date: 09/01/2011
Action: Other Workplan

Global Id: T0606500543
Action Type: RESPONSE
Date: 06/14/2012
Action: Remedial Progress Report

Global Id: T0606500543
Action Type: RESPONSE
Date: 02/28/2012
Action: Other Report / Document

Global Id: T0606500543
Action Type: RESPONSE
Date: 05/11/2012
Action: Other Report / Document

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 02/27/2008
Action: Technical Correspondence / Assistance / Other - #RCDEH 022708

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 05/16/2007
Action: File review

Global Id: T0606500543
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500543
Action Type: ENFORCEMENT

(Continued) **S100279602**

Date: 08/13/2009
Action: Staff Letter - #RCDEH081309

Global Id: T0606500543
Action Type: ENFORCEMENT
Date: 03/16/2011
Action: File review - #RCDEH Site File

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2010
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2010
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2010
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 04/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 07/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 10/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: RESPONSE
Date: 01/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606500543
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

(Continued) **S100279602**

Global Id:	T0606500543
Action Type:	ENFORCEMENT
Date:	12/19/2011
Action:	Staff Letter - #RCDEH121911

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	980442
Employee:	Briones-LOP
Site Closed:	Not Closed
Case Type:	Drinking Water Aquifer affected
Facility Status:	RP

CHMIRS:

OES Incident Number:	8910594
OES notification:	Not reported
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	28-JUL-89
Date Completed:	**28-JUL-89**
Property Use:	500
Agency Id Number:	33075
Agency Incident Number:	8910275
Time Notified:	2133
Time Completed:	2244
Surrounding Area:	500
Estimated Temperature:	75
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	N
Resp Agncy Personel # Of Decontaminated:	0
Responding Agency Personel # Of Injuries:	0
Responding Agency Personel # Of Fatalities:	0
Others Number Of Decontaminated:	0
Others Number Of Injuries:	0
Others Number Of Fatalities:	0
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	WILLAIM A. BRAUN F025
Report Date:	28-JUL-89
Comments:	Not reported
Facility Telephone:	714 782-5679
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Not reported

(Continued) **S100279602**

Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	88-92
Agency:	Not reported
Incident Date:	Not reported
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Not reported
Site Type:	Not reported
E Date:	16-MAY-90
Substance:	Not reported
Quantity Released:	Not reported
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
Description:	Not reported

F38 **4395 MARKET** **US BROWNFIELDS** **1010695663**
ENE **4395 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.182 mi.
962 ft. **Site 10 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4395 MARKET
Property #:	215271009
Parcel size:	0.41
Property Description:	Commercial
Latitude:	33.976816
Longitude:	-117.379598
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65003
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported

4395 MARKET (Continued) **1010695663**

Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Julia Anne & Robert L Everett
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	N
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y

4395 MARKET (Continued) **1010695663**

Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717467

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F39 **MILLER S L B RADIATOR & FENDER SERVICE** **EDR US Hist Auto Stat** **1009019715**
ENE **4395 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.182 mi.
962 ft. **Site 11 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

EDR Historical Auto Stations:

Name:	RIVERSIDE PETROLEUM CO
Year:	1936
Type:	GAS AND OIL SERVICE STATIONS
Name:	HAMILTON ROY
Year:	1945
Type:	AUTOMOBILE REPAIRING
Name:	MILLER S L B RADIATOR & FENDER SERVICE
Year:	1951
Type:	AUTOMOBILE REPAIRING

F40 ENE 1/8-1/4 0.182 mi. 962 ft. | **THRIFTY OIL #343**
4395 MARKET ST
RIVERSIDE, CA 92501 | **HIST CORTESE**
CA FID UST
SWEEPS UST | **S101589926**
N/A

Site 12 of 25 in cluster F

Relative: Higher

Actual: 831 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083303275T

CA FID UST:

Facility ID:	33001090
Regulated By:	UTNKA
Regulated ID:	00002176
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	2139239876
Mail To:	Not reported
Mailing Address:	10000 LAKEWOOD BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 92501
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	2176
Number:	1
Board Of Equalization:	44-010930
Referral Date:	11-19-92
Action Date:	11-19-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	343-1
Swrcb Tank Id:	33-000-002176-000001
Actv Date:	11-19-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	4

Status:	Active
Comp Number:	2176
Number:	1
Board Of Equalization:	44-010930
Referral Date:	11-19-92
Action Date:	11-19-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	343-2

THRIFTY OIL #343 (Continued) **S101589926**

Swrcb Tank Id:	33-000-002176-000002
Actv Date:	11-19-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	2176
Number:	1
Board Of Equalization:	44-010930
Referral Date:	11-19-92
Action Date:	11-19-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	343-3
Swrcb Tank Id:	33-000-002176-000003
Actv Date:	11-19-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	2176
Number:	1
Board Of Equalization:	44-010930
Referral Date:	11-19-92
Action Date:	11-19-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	343-10
Swrcb Tank Id:	33-000-002176-000004
Actv Date:	11-19-92
Capacity:	280
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL
Number Of Tanks:	Not reported

F41 **ARCO FACILITY NO 09713** **RCRA-SQG** **1004677870**
ENE **4395 MARKET ST** **FINDS** **CAR000102459**
1/8-1/4 **RIVERSIDE, CA 92503**
0.182 mi.
962 ft. **Site 13 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

RCRA-SQG:

Date form received by agency:	07/15/2002
Facility name:	ARCO FACILITY NO 09713
Facility address:	4395 MARKET ST RIVERSIDE, CA 92503
EPA ID:	CAR000102459
Mailing address:	P O BOX 6038 ARTESIA, CA 907026038
Contact:	JACK OMAN
Contact address:	P O BOX 6038

ARCO FACILITY NO 09713 (Continued) **1004677870**

ARTESIA, CA 907026038
Contact country: US
Contact telephone: (714) 690-2425
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: B P W COAST PRODUCTS LLC
Owner/operator address: P O BOX 6038
ARTESIA, CA 90702
Owner/operator country: Not reported
Owner/operator telephone: (714) 690-2425
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

ARCO FACILITY NO 09713 (Continued) **1004677870**

Violation Status: No violations found

FINDS:

Registry ID: 110012203212

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

F42 **THRIFTY OIL STN. #343** **HIST UST** **U001576296**
ENE **4395 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.182 mi.
962 ft. **Site 14 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

HIST UST:

Region:	STATE
Facility ID:	00000002176
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Contact Name:	Not reported
Telephone:	2139239876
Owner Name:	THRIFTY OIL CO.
Owner Address:	10000 LAKEWOOD BLVD.
Owner City,St,Zip:	DOWNEY, CA 90240
Tank Num:	001
Container Num:	343-1
Year Installed:	Not reported
Tank Capacity:	00010164
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	343-2
Year Installed:	Not reported
Tank Capacity:	00010164
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	343-3

THRIFTY OIL STN. #343 (Continued) **U001576296**

Year Installed:	Not reported
Tank Capacity:	00010164
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	1/4 inches
Leak Detection:	Stock Inventor

Tank Num:	004
Container Num:	343-10
Year Installed:	Not reported
Tank Capacity:	00000280
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	12 gauge
Leak Detection:	Stock Inventor

F43 **RIVIRSIDEI PIETROLE UM CO** **EDR US Hist Auto Stat** **1009023473**
ENE **4395 MARKET DR** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.183 mi.
966 ft. **Site 15 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

EDR Historical Auto Stations:

Name:	RIVIRSIDEI PIETROLE UM CO
Year:	1939
Type:	GAS AND OIL SERVICE STATIONS

F44 **RIVERSIDE PETROLEUM CO** **EDR US Hist Cleaners** **1009146944**
ENE **4395 MARKET DR** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.183 mi.
966 ft. **Site 16 of 25 in cluster F**

Relative:
Higher

Actual:
831 ft.

EDR Historical Cleaners:

Name:	RIVERSIDE PETROLEUM CO
Year:	1945
Type:	FAMILY LAUNDRY WORK

E45 **4343 MARKET** **US BROWNFIELDS FINDS** **1010698684**
ENE **4343 MARKET** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.188 mi.
992 ft. **Site 2 of 17 in cluster E**

Relative:
Higher

Actual:
832 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4343 MARKET
Property #:	215271004
Parcel size:	0.84
Property Description:	Commercial
Latitude:	33.977262
Longitude:	-117.379363
HCM label:	Not reported
Map scale:	Not reported

4343 MARKET (Continued) **1010698684**

Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64998
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Community Inv Ltd Liability Co
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported

4343 MARKET (Continued) **1010698684**

PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717403

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

G46 **3895 12TH** **US BROWNFIELDS** **1010698673**
ENE **3895 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.190 mi.
1003 ft. **Site 1 of 7 in cluster G**

Relative:
Higher

Actual:
835 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3895 12TH
Property #:	215251010
Parcel size:	0.13
Property Description:	Commercial
Latitude:	33.979194
Longitude:	-117.379251
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64984
Start date:	Not reported
Completed date:	Not reported

3895 12TH (Continued) **1010698673**

Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John N & Carolyn E Aquilina
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported

3895 12TH (Continued) **1010698673**

Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717261

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F47 **WHITTAKER W E** **EDR US Hist Auto Stat** **1009021830**
East **4404 MAGNOLIA AVE** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.191 mi.
1008 ft. **Site 17 of 25 in cluster F**

Relative:
Higher

Actual:
832 ft.

EDR Historical Auto Stations:

Name:	WHITTAKER W E
Year:	1951
Type:	GASOLINE STATIONS

F48 **FOAMY CARWASH** **HIST UST** **U001576274**
East **4404 MAGNOLIA AVE** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.191 mi.
1008 ft. **Site 18 of 25 in cluster F**

Relative:
Higher

Actual:
832 ft.

HIST UST:

Region:	STATE
Facility ID:	00000020132
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Contact Name:	Not reported
Telephone:	7146868790
Owner Name:	MAXZ B. ABBOTT

FOAMY CARWASH (Continued) **U001576274**

Owner Address: 4404 MAGNOLIA STREET
Owner City,St,Zip: RIVERSIDE, CA 92501

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: WASTE
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: Visual

F49
East
1/8-1/4
0.191 mi.
1008 ft.

FOAMY CARWASH
4404 MAGNOLIA AVE
RIVERSIDE, CA 92501

Site 19 of 25 in cluster F

HIST CORTESE **S101629420**
LUST **N/A**
CA FID UST
SWEEPS UST

Relative:
Higher

Actual:
832 ft.

CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 083302797T

LUST:
Region: STATE
Global Id: T0606500453
Latitude: 33.9766957
Longitude: -117.3796271
Case Type: LUST Cleanup Site

FOAMY CARWASH (Continued) **S101629420**

Status:	Completed - Case Closed
Status Date:	01/06/2003
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	SCB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083302797T
LOC Case Number:	960594
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500453
Contact Type:	Regional Board Caseworker
Contact Name:	NANCY OLSON-MARTIN
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	nolson-martin@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0606500453
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	sbolting@rivcocha.org
Phone Number:	9519558982

Regulatory Activities:

Global Id:	T0606500453
Action Type:	ENFORCEMENT
Date:	01/06/2003
Action:	Closure/No Further Action Letter - #Riv Co Closure

Global Id:	T0606500453
Action Type:	Other
Date:	01/01/1950
Action:	Leak Stopped

Global Id:	T0606500453
Action Type:	ENFORCEMENT
Date:	01/05/2003
Action:	File review - #RCDEH Upload Site File 5/25/2010

Global Id:	T0606500453
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

Global Id:	T0606500453
Action Type:	Other
Date:	01/01/1950

FOAMY CARWASH (Continued) **S101629420**

Action: Leak Reported

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083302797T
Local Case Num:	960594
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	14TH
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0606500453
How Stopped Date:	5/2/1996
Enter Date:	6/20/1996
Review Date:	5/2/1996
Prelim Assess:	10/8/1996
Discover Date:	5/2/1996
Enforcement Date:	Not reported
Close Date:	1/6/2003
Workplan:	9/16/1996
Pollution Char:	12/31/1996
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	6/20/1996
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9759421
Longitude:	-117.3785483
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	NOM
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported

FOAMY CARWASH (Continued) **S101629420**

Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

CA FID UST:
Facility ID: 33006460
Regulated By: UTNKA
Regulated ID: 00020132
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7146868790
Mail To: Not reported
Mailing Address: 4404 MAGNOLIA AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: RIVERSIDE 92501
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 20132
Number: 1
Board Of Equalization: 44-018070
Referral Date: 09-17-92
Action Date: 09-17-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 000506
Swrcb Tank Id: 33-000-020132-000001
Actv Date: 06-06-90
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 3

Status: Active
Comp Number: 20132
Number: 1
Board Of Equalization: 44-018070
Referral Date: 09-17-92
Action Date: 09-17-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 000506
Swrcb Tank Id: 33-000-020132-000002
Actv Date: 06-06-90
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED

FOAMY CARWASH (Continued) **S101629420**

Number Of Tanks: Not reported

Status: Active
Comp Number: 20132
Number: 1
Board Of Equalization: 44-018070
Referral Date: 09-17-92
Action Date: 09-17-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 00506
Swrcb Tank Id: 33-000-020132-000003
Actv Date: 06-06-90
Capacity: 6000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

G50 **3882 12TH** **US BROWNFIELDS** **1010698679**
ENE **3882 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.194 mi.
1024 ft. **Site 2 of 7 in cluster G**

Relative:
Higher

Actual:
835 ft.

US BROWNFIELDS:

Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 3882 12TH
Property #: 215261013
Parcel size: 0.18
Property Description: Commercial
Latitude: 33.978915
Longitude: -117.379289
HCM label: Not reported
Map scale: Not reported
Point of reference: Not reported
Datum: Not reported
ACRES property ID: 64993
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 400
Assessment funding source: US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: Not reported
Cleanup funding entity: Not reported
Grant type: N/A
Accomplishment type: Phase I Environmental Assessment
Accomplishment count: 1
Cooperative agreement #: 96986301
Ownership entity: Not reported
Current owner: John P Elliott

3882 12TH (Continued) **1010698679**

Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported

3882 12TH (Continued) **1010698679**

Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717350

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F51 **4398 MARKET** **US BROWNFIELDS** **1010695929**
ENE **4398 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.194 mi.
1025 ft. **Site 20 of 25 in cluster F**

Relative:
Higher

Actual:
832 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4398 MARKET
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976744
Longitude:	-117.379509
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65038
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported

4398 MARKET (Continued) **1010695929**

IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

4398 MARKET (Continued) **1010695929**

Registry ID: 110038717797

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F52
ENE
1/8-1/4
0.194 mi.
1025 ft.

EMINERT J A **EDR US Hist Auto Stat** **1009021445**
4398 MARKET ST **N/A**
RIVERSIDE, CA

Site 21 of 25 in cluster F

Relative:
Higher

Actual:
832 ft.

EDR Historical Auto Stations:

Name: EMINERT J A
Year: 1930
Type: GASOLINE AND OIL SERVICE STATIONS

Name: LAIRD L L
Year: 1936
Type: GAS AND OIL SERVICE STATIONS

Name: DEANZA MUFFLER SERVICE
Year: 1999
Address: 4398 MARKET ST

Name: DEANZA MUFFLER SERVICE
Year: 2000
Address: 4398 MARKET ST

F53
ENE
1/8-1/4
0.194 mi.
1026 ft.

WLLLSON S AUTO TOP SHOP **EDR US Hist Auto Stat** **1009019406**
4390 MARKET DR **N/A**
RIVERSIDE, CA

Site 22 of 25 in cluster F

Relative:
Higher

Actual:
833 ft.

EDR Historical Auto Stations:

Name: WLLLSON S AUTO TOP SHOP
Year: 1936
Type: AUTOMOBILE REPAIRS

H54
East
1/8-1/4
0.196 mi.
1033 ft.

RIVERSIDE COMMUNITY HOSPITAL **HIST CORTESE** **S100281146**
4445 MAGNOLIA AVE **LUST** **N/A**
RIVERSIDE, CA 92501

Site 1 of 6 in cluster H

Relative:
Higher

Actual:
828 ft.

CORTESE:

Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 083300712T

RIVERSIDE COMMUNITY HOSPITAL (Continued) **S100281146**

LUST:

Region:	STATE
Global Id:	T0606500076
Latitude:	33.976702
Longitude:	-117.381627
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/27/1989
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	UNK
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083300712T
LOC Case Number:	87557
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500076
Contact Type:	Local Agency Caseworker
Contact Name:	UNK
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	Not reported
Phone Number:	Not reported

Global Id:	T0606500076
Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	phannon@waterboards.ca.gov
Phone Number:	Not reported

Regulatory Activities:

Global Id:	T0606500076
Action Type:	ENFORCEMENT
Date:	04/09/2009
Action:	Closure/No Further Action Letter - #Site Closure

Global Id:	T0606500076
Action Type:	ENFORCEMENT
Date:	09/27/1989
Action:	Closure/No Further Action Letter

Global Id:	T0606500076
Action Type:	Other
Date:	01/01/1950
Action:	Leak Stopped

Global Id:	T0606500076
Action Type:	ENFORCEMENT

RIVERSIDE COMMUNITY HOSPITAL (Continued) **S100281146**

Date: 04/08/2009
Action: File review - #RCDEH Upload Site File 8/19/2010

Global Id: T0606500076
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500076
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 87557
Employee: Rogers
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed

H55 **RIVERSIDE COMMUNITY HOSPITAL** **CA FID UST** **U002095641**
East **4445 MAGNOLIA AVE** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.196 mi.
1033 ft. **Site 2 of 6 in cluster H**

Relative:
Higher

Actual:
828 ft.

CA FID UST:
Facility ID: 33000496
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7147883140
Mail To: Not reported
Mailing Address: 4445 MAGNOLIA AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: RIVERSIDE 92501
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

H56 East 1/8-1/4 0.196 mi. 1033 ft. | **RIVERSIDE COMMUNITY HOSPITAL**
4445 MAGNOLIA AVE
RIVERSIDE, CA 92501

Site 3 of 6 in cluster H

LUST, UST, SWEEPS UST, EMI | **U002244889**
N/A

Relative: Higher

Actual: 828 ft.

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083300712T
Local Case Num:	Not reported
Case Type:	Soil only
Substance:	Diesel
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	14TH
Enf Type:	CLOS
Funding:	Federal Funds
How Discovered:	Tank Test
How Stopped:	Not reported
Leak Cause:	Corrosion
Leak Source:	Tank
Global ID:	T0606500076
How Stopped Date:	6/30/1987
Enter Date:	12/18/1987
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	6/30/1987
Enforcement Date:	Not reported
Close Date:	9/27/1989
Workplan:	Not reported
Pollution Char:	12/18/1987
Remed Plan:	Not reported
Remed Action:	9/12/1989
Monitoring:	Not reported
Enter Date:	12/18/1987
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9759251
Longitude:	-117.3798813
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported

RIVERSIDE COMMUNITY HOSPITAL (Continued) **U002244889**

Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

UST:
Facility ID: 641
Latitude: 33.97572
Longitude: -117.38042

RIVERSIDE CO. UST:
Region: RIVERSIDE
Total Tanks: 2

SWEEPS UST:
Status: Active
Comp Number: 883
Number: 1
Board Of Equalization: Not reported
Referral Date: 09-17-92
Action Date: 09-17-92
Created Date: 09-17-92
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 33-000-000883-000001
Actv Date: 09-17-92
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: 1

EMI:
Year: 1987
County Code: 33
Air Basin: SC
Facility ID: 3159
Air District Name: SC
SIC Code: 8062
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 1
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1990
County Code: 33
Air Basin: SC
Facility ID: 3159
Air District Name: SC

RIVERSIDE COMMUNITY HOSPITAL (Continued) **U002244889**

SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1996
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	20
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6

RIVERSIDE COMMUNITY HOSPITAL (Continued) **U002244889**

Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

RIVERSIDE COMMUNITY HOSPITAL (Continued) **U002244889**

Year:	2001
County Code:	33
Air Basin:	SC
Facility ID:	3159
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

F57 **WILSON J HAROLD** **EDR US Hist Auto Stat** **1009023447**
ENE **4380 MARKET DR** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.196 mi.
1033 ft. **Site 23 of 25 in cluster F**

Relative:
Higher

Actual:
833 ft.

EDR Historical Auto Stations:

Name:	WILSON J HAROLD
Year:	1945
Type:	Not reported
Name:	TOP DAWG AUTO REPAIR
Year:	1999
Address:	4380 MARKET ST
Name:	TOP DAWG AUTO REPAIR
Year:	2000
Address:	4380 MARKET ST
Name:	TOP DAWG AUTO REPAIR
Year:	2001
Address:	4380 MARKET ST
Name:	TOP DAWG AUTO REPAIR
Year:	2002
Address:	4380 MARKET ST
Name:	TOP DAWG AUTO REPAIR
Year:	2003
Address:	4380 MARKET ST
Name:	TOP DAWG AUTO REPAIR
Year:	2004
Address:	4380 MARKET ST
Name:	TOP DAWG AUTO REPAIR
Year:	2005
Address:	4380 MARKET ST
Name:	TOP DAWG AUTO REPAIR
Year:	2006

WILSON J HAROLD (Continued) **1009023447**

Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2007
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2008
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2009
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2010
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2011
Address: 4380 MARKET ST

Name: TOP DAWG AUTO REPAIR
Year: 2012
Address: 4380 MARKET ST

F58 **4380 MARKET** **US BROWNFIELDS** **1010695937**
ENE **4380 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.196 mi.
1033 ft. **Site 24 of 25 in cluster F**

Relative:
Higher

Actual:
833 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4380 MARKET
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.976804
Longitude:	-117.379336
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65037
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported

4380 MARKET (Continued) **1010695937**

Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported

4380 MARKET (Continued) **1010695937**

Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717788

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

F59 **WILSON FRAN** **EDR US Hist Auto Stat** **1009022027**
ENE **4380 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.196 mi.
1033 ft. **Site 25 of 25 in cluster F**

Relative:
Higher

Actual:
833 ft.

EDR Historical Auto Stations:
Name: WILSON FRAN
Year: 1951
Type: AUTOMOBILE REPAIRING

G60 **3878 12TH** **US BROWNFIELDS** **1010698677**
ENE **3878 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.196 mi.
1034 ft. **Site 3 of 7 in cluster G**

Relative:
Higher

Actual:
835 ft.

US BROWNFIELDS:
Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 3878 12TH
Property #: 215261002
Parcel size: 0.07
Property Description: Commercial
Latitude: 33.978897
Longitude: -117.379251
HCM label: Not reported
Map scale: Not reported
Point of reference: Not reported
Datum: Not reported
ACRES property ID: 64988
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported

3878 12TH (Continued) **1010698677**

Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John P Elliott
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported

3878 12TH (Continued) **1010698677**

Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717305

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

G61 **3877 12TH** **US BROWNFIELDS** **1010698676**
ENE **3877 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.198 mi.
1046 ft. **Site 4 of 7 in cluster G**

Relative:
Higher

Actual:
835 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3877 12TH
Property #:	215251014
Parcel size:	0.28
Property Description:	Commercial
Latitude:	33.979124
Longitude:	-117.379075
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64987
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported

3877 12TH (Continued) **1010698676**

Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Vincent P Nolan & Frank S Peasley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported

3877 12TH (Continued) **1010698676**

Num. of cleanup and re-dev. jobs: Not reported
Past use greenspace acreage: Not reported
Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717298

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

E62
ENE
1/8-1/4
0.199 mi.
1050 ft.

BJ ET L CO THE
4344 MARKET DR
RIVERSIDE, CA

EDR US Hist Cleaners **1009143320**
N/A

Site 3 of 17 in cluster E

Relative:
Higher

Actual:
833 ft.

EDR Historical Cleaners:

Name: BJ ET L CO THE
Year: 1939
Type: HAT CLEANERS AND BLOCKERS

Name: BELL CO THE
Year: 1939
Type: CURTAIN CLEANERS

Name: BEL L CO THE
Year: 1939
Type: CLEANERS UPOLSTERY

Name: BELL CO THE
Year: 1945
Type: CLOTHES PRESSERS AND CLEANERS

E63
ENE
1/8-1/4
0.199 mi.
1052 ft.

WILSON J HAROLD
4340 MARKET DR
RIVERSIDE, CA

EDR US Hist Auto Stat **1009019407**
N/A

Site 4 of 17 in cluster E

Relative:
Higher

Actual:
833 ft.

EDR Historical Auto Stations:

Name: WILSON J HAROLD
Year: 1936
Type: Not reported

E64 ENE 1/8-1/4 0.199 mi. 1053 ft. | **MARR & GRAVES**
4344 MARKET ST
RIVERSIDE, CA | **EDR US Hist Auto Stat** | **1009021756**
N/A

Site 5 of 17 in cluster E

Relative: Higher

Actual: 833 ft.

EDR Historical Auto Stations:

Name:	MARR & GRAVES
Year:	1930
Type:	AUTO REPAIRING

E65 ENE 1/8-1/4 0.199 mi. 1053 ft. | **4344 MARKET**
4344 MARKET
RIVERSIDE, CA 92501 | **US BROWNFIELDS FINDS** | **1010695936**
N/A

Site 6 of 17 in cluster E

Relative: Higher

Actual: 833 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4344 MARKET
Property #:	215272003
Parcel size:	0.74
Property Description:	Commercial
Latitude:	33.977145
Longitude:	-117.379163
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65036
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ruth C Teley
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported

4344 MARKET (Continued) **1010695936**

IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717779

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES)
is an federal online database for Brownfields Grantees to

4344 MARKET (Continued) **1010695936**

electronically submit data directly to EPA.

E66
ENE
1/8-1/4
0.200 mi.
1055 ft.

BELL CLEANING CO
4336 MARKET DR
RIVERSIDE, CA

EDR US Hist Cleaners **1009144532**
N/A

Site 7 of 17 in cluster E

Relative:
Higher

Actual:
834 ft.

EDR Historical Cleaners:

Name:	BELL CLEANING CO
Year:	1930
Type:	CLOTHES PRESSERS AND CLEANERS
Name:	BELL CLEANING CO
Year:	1936
Type:	DYERS AND CLEANERS
Name:	BELL CLEANING CO
Year:	1936
Type:	CARPET CLEANERS AND LAYERS
Name:	BELL CLEANING CO
Year:	1936
Type:	CURTAIN CLEANERS
Name:	BELL CLEANING CO
Year:	1936
Type:	FUR CLEANERS AND GLAZERS
Name:	BELL CLEANING CO
Year:	1936
Type:	CLOTHES PRESSERS AND CLEANERS

E67
ENE
1/8-1/4
0.200 mi.
1058 ft.

PUBLIC EMPLOYEE RIV. CO (
4336
RIVERSIDE, CA 92502

HIST CORTESE **S101300588**
LUST **N/A**

Site 8 of 17 in cluster E

Relative:
Higher

Actual:
834 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083300555T

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Remediation Plan
Case Number:	083300555T
Local Case Num:	90009
Case Type:	Aquifer affected
Substance:	Hydrocarbons
Qty Leaked:	Not reported

PUBLIC EMPLOYEE RIV. CO ((Continued) **S101300588**

Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site
Cross Street:	13TH
Enf Type:	SEL
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	Corrosion
Leak Source:	Tank
Global ID:	T0606500063
How Stopped Date:	12/19/1989
Enter Date:	7/21/1987
Review Date:	Not reported
Prelim Assess:	1/30/1990
Discover Date:	12/19/1989
Enforcement Date:	1/1/1965
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	11/15/1990
Remed Plan:	1/8/2001
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	7/21/1987
GW Qualifies:	<
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.97744994
Longitude:	-117.3786868
MTBE Date:	3/10/2000
Max MTBE GW:	5
MTBE Concentration:	2
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	C
Staff:	CAB
Staff Initials:	UNK
Lead Agency:	Regional Board
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	3/6/95 - DRAFTING CAO 8/1/96 - 7/96 SAMPLING RESULTS - PCE 580, BENZENE 700

E68 ENE 1/8-1/4 0.200 mi. 1058 ft. | **4336 MARKET**
4336 MARKET
RIVERSIDE, CA 92501

Site 9 of 17 in cluster E

US BROWNFIELDS FINDS | **1010698413**
N/A

Relative: Higher

Actual: 834 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4336 MARKET
Property #:	215272008
Parcel size:	0.22
Property Description:	Commercial
Latitude:	33.977196
Longitude:	-117.379071
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64964
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Service Employees International Union 1997
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4336 MARKET (Continued) **1010698413**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	N
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716896

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

E69 ENE 1/8-1/4 0.200 mi. 1058 ft. | **PUBLIC EMPLOYEE RIV. CO (PERC)** | **LUST** | **S104228145**
4336 MARKET ST | **SLIC** | **N/A**
RIVERSIDE, CA 92502

Site 10 of 17 in cluster E

Relative: Higher

Actual: 834 ft.

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	90009
Employee:	Bunchek
Site Closed:	Referred to Water Board
Case Type:	Ground water
Facility Status:	0

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	06/14/2011
Global Id:	T0606500063
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	90009
Latitude:	33.977449939
Longitude:	-117.3786868
Case Type:	Cleanup Program Site
Case Worker:	CAB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083300555T
File Location:	Not reported
Potential Media Affected:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	* Solvents, Other Solvent or Non-Petroleum Hydrocarbon
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

G70 ENE 1/8-1/4 0.200 mi. 1058 ft. | **3868 12TH** | **US BROWNFIELDS** | **1010698680**
3868 12TH | **FINDS** | **N/A**
RIVERSIDE, CA 92501

Site 5 of 7 in cluster G

Relative: Higher

Actual: 835 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3868 12TH
Property #:	215261014
Parcel size:	0.64
Property Description:	Commercial
Latitude:	33.978854
Longitude:	-117.379157
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64994
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported

3868 12TH (Continued) **1010698680**

Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Amy P & Raymond J Clark
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported

3868 12TH (Continued) **1010698680**

Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717369

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

E71 **4293 MARKET** **US BROWNFIELDS** **1010698690**
ENE **4293 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.201 mi.
1062 ft. **Site 11 of 17 in cluster E**

Relative:
Higher

Actual:
834 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4293 MARKET
Property #:	215261007
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.977866
Longitude:	-117.378992
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64992
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported

4293 MARKET (Continued) **1010698690**

Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Sam J & Margaret J Miceli
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	N
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	N
Cleanup other description:	Not reported

4293 MARKET (Continued) **1010698690**

Num. of cleanup and re-dev. jobs: Not reported
Past use greenspace acreage: Not reported
Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717341

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

I72 **EDR US Hist Cleaners** **1015064424**
WNW **4644 PINE ST** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.202 mi.
1066 ft. **Site 1 of 2 in cluster I**

Relative:
Lower

Actual:
779 ft.

EDR Historical Cleaners:

Name: PINE CENTER CLEANERS
Year: 1999
Address: 4644 PINE ST

Name: PINE CENTER CLEANERS
Year: 2000
Address: 4644 PINE ST

Name: PINE CTR CLEANERS
Year: 2001
Address: 4644 PINE ST

Name: PINE CTR CLEANERS
Year: 2002
Address: 4644 PINE ST

Name: PINE CTR CLEANERS
Year: 2003
Address: 4644 PINE ST

Name: PINE CTR CLEANERS
Year: 2004
Address: 4644 PINE ST

Name: PINE CENTER CLEANERS
Year: 2005
Address: 4644 PINE ST

(Continued) **1015064424**

Name: PINE CENTER CLEANERS
Year: 2006
Address: 4644 PINE ST

Name: PINE CENTER CLEANERS
Year: 2007
Address: 4644 PINE ST

Name: PINE CENTER CLEANERS
Year: 2008
Address: 4644 PINE ST

I73
WNW
1/8-1/4
0.202 mi.
1066 ft.

Relative:
Lower

Actual:
779 ft.

PINE CENTER CLEANERS
4644 PINE ST
RIVERSIDE, CA 92501

Site 2 of 2 in cluster I

RCRA-SQG **1000195691**
FINDS **CAD982320343**
SLIC
DRYCLEANERS
HAZNET
EMI

RCRA-SQG:
Date form received by agency: 03/16/1988
Facility name: PINE CENTER CLEANERS
Facility address: 4644 PINE ST
RIVERSIDE, CA 92501
EPA ID: CAD982320343
Contact: ENVIRONMENTAL MANAGER
Contact address: 4644 PINE ST
RIVERSIDE, CA 92501
Contact country: US
Contact telephone: (714) 683-9496
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NATHANIEL N CHO
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator

PINE CENTER CLEANERS (Continued) **1000195691**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002793317

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SLIC:

Region:	STATE
Facility Status:	**Open - Site Assessment**
Status Date:	10/18/2004
Global Id:	SLT8R0223907
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	Not reported
Latitude:	33.9765435690856
Longitude:	-117.38911986351
Case Type:	Cleanup Program Site
Case Worker:	PAH
Local Agency:	Not reported
RB Case Number:	SLT8R022
File Location:	Regional Board
Potential Media Affected:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

SLIC REG 8:

PINE CENTER CLEANERS (Continued) **1000195691**

Type: Soil and Groundwater
Facility Status: 39512
Region: 8
Staff: EGK
Substance: EGK
Lead Agency: EGK
Location Code: EGK
Thomas Bros Code: EGK

DRYCLEANERS:
EPA Id: CAD982320343
NAICS Code: 81232
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)
SIC Code: 7211
SIC Description: Power Laundries, Family and Commercial
Create Date: 06/17/1988
Facility Active: No
Inactive Date: 06/30/1998
Facility Addr2: Not reported
Owner Name: YOUN CHUL CHUN
Owner Address: 4644 PINE ST
Owner Address 2: Not reported
Owner Telephone: 9098247067
Contact Name: YONG CHUL CHUN
Contact Address: INACT PER 98VQ FINAL NOTICE
Contact Address 2: - BATCH 4/27
Contact Telephone: 9098247067

HAZNET:
Year: 2005
Gepaid: CAD982320343
Contact: YONG CHUL CHUN
Telephone: 9098247067
Mailing Name: Not reported
Mailing Address: 4644 PINE ST
Mailing City,St,Zip: RIVERSIDE, CA 925014007
Gen County: Not reported
TSD EPA ID: NVR000076158
TSD County: Not reported
Waste Category: Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: Not reported
Tons: Not reported
Facility County: Riverside

Year: 2005
Gepaid: CAD982320343
Contact: YONG CHUL CHUN
Telephone: 9098247067
Mailing Name: Not reported
Mailing Address: 4644 PINE ST
Mailing City,St,Zip: RIVERSIDE, CA 925014007
Gen County: Not reported
TSD EPA ID: NVR000076158
TSD County: Not reported
Waste Category: Halogenated solvents (chloroforms, methyl chloride, perchloroethylene,

PINE CENTER CLEANERS (Continued) **1000195691**

	etc)
Disposal Method:	Invalid Code
Tons:	0.12
Facility County:	Riverside

Year:	2005
Gepaid:	CAD982320343
Contact:	YONG CHUL CHUN
Telephone:	9098247067
Mailing Name:	Not reported
Mailing Address:	4644 PINE ST
Mailing City,St,Zip:	RIVERSIDE, CA 925014007
Gen County:	Not reported
TSD EPA ID:	NVR000076158
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Riverside

Year:	1998
Gepaid:	CAD982320343
Contact:	YOUN CHUL CHUN
Telephone:	9098247067
Mailing Name:	Not reported
Mailing Address:	4644 PINE ST
Mailing City,St,Zip:	RIVERSIDE, CA 925014007
Gen County:	Not reported
TSD EPA ID:	CAD981375983
TSD County:	Not reported
Waste Category:	Solids or sludges with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Recycler
Tons:	.0375
Facility County:	Riverside

Year:	1996
Gepaid:	CAD982320343
Contact:	YOUN CHUL CHUN
Telephone:	9098247067
Mailing Name:	Not reported
Mailing Address:	4644 PINE ST
Mailing City,St,Zip:	RIVERSIDE, CA 925014007
Gen County:	Not reported
TSD EPA ID:	CAD981397417
TSD County:	Not reported
Waste Category:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	Recycler
Tons:	.0583
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year:	1990
County Code:	33

PINE CENTER CLEANERS (Continued) **1000195691**

Air Basin:	SC
Facility ID:	42266
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

H74 **YOUNG G L** **EDR US Hist Cleaners** **1009144525**
East **4466 MAGNOLIA AVE** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.203 mi.
1073 ft. **Site 4 of 6 in cluster H**

Relative:
Higher

Actual:
827 ft.

EDR Historical Cleaners:

Name:	YOUNG G L
Year:	1930
Type:	CLOTHES PRESSERS AND CLEANERS
Name:	PARIS CLEANERS
Year:	1936
Type:	CLOTHES PRESSERS AND CLEANERS
Name:	PARIS CLEANERS
Year:	1936
Type:	DYERS AND CLEANERS
Name:	PARIS CLEANERS
Year:	1939
Type:	CLOTHES PRESSERS AND CLEANERS CONT
Name:	PARIS CLEANERS
Year:	1945
Type:	CLOTHES PRESSERS AND CLEANERS
Name:	PARIS CLEANERS
Year:	1945
Type:	DYERS AND CLEANERS

E75 **4310 MARKET** **US BROWNFIELDS** **1010698414**
ENE **4310 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.204 mi.
1076 ft. **Site 12 of 17 in cluster E**

Relative:
Higher

Actual:
834 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4310 MARKET

4310 MARKET (Continued) **1010698414**

Property #:	215272009
Parcel size:	0.24
Property Description:	Commercial
Latitude:	33.977429
Longitude:	-117.378912
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64965
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Service Employees International Union 1997
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported

4310 MARKET (Continued) **1010698414**

Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716903

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

H76 **STANDARD STATIONS INC** **EDR US Hist Auto Stat** **1009019724**
East **4488 MAGNOLIA AVE** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.205 mi.
1082 ft. **Site 5 of 6 in cluster H**

Relative:
Higher

Actual:
823 ft.

EDR Historical Auto Stations:

Name:	SOUTHERN GASOLINE STATIONS INC
Year:	1930
Type:	GASOLINE AND OIL SERVICE STATIONS

Name:	STANDARD STATIONS INC
Year:	1936
Type:	GAS AND OIL SERVICE STATIONS

STANDARD STATIONS INC (Continued) **1009019724**

Name: STANDARD STATIONS INC
Year: 1939
Type: GAS AND OIL SERVICE STATIONS

Name: STANDARD STATIONS INC
Year: 1951
Type: GASOLINE STATIONS

H77
East
1/8-1/4
0.205 mi.
1082 ft.

STANDARD STATIONS INC
4488 MAGNOLIA AV
RIVERSIDE, CA

EDR US Hist Cleaners **1009146954**
N/A

Site 6 of 6 in cluster H

Relative:
Higher

Actual:
823 ft.

EDR Historical Cleaners:
Name: STANDARD STATIONS INC
Year: 1945
Type: FAMILY LAUNDRY WORK

G78
NE
1/8-1/4
0.207 mi.
1094 ft.

4166 ALMOND
4166 ALMOND
RIVERSIDE, CA 92501

US BROWNFIELDS FINDS **1010698674**
N/A

Site 6 of 7 in cluster G

Relative:
Higher

Actual:
836 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4166 ALMOND
Property #:	215251011
Parcel size:	0.07
Property Description:	Commercial
Latitude:	33.979444
Longitude:	-117.379111
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64985
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301

4166 ALMOND (Continued) **1010698674**

Ownership entity:	Not reported
Current owner:	Mary E Daniels
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported

4166 ALMOND (Continued) **1010698674**

Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717270

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

E79 **4271 MARKET** **US BROWNFIELDS** **1010698689**
ENE **4271 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.208 mi.
1099 ft. **Site 13 of 17 in cluster E**

Relative:
Higher

Actual:
836 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4271 MARKET
Property #:	215261006
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.978037
Longitude:	-117.378879
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64991
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Sam J & Margaret J Miceli
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported

4271 MARKET (Continued) **1010698689**

Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	N
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

4271 MARKET (Continued) **1010698689**

FINDS:

Registry ID: 110038717332

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

E80 ENE 1/8-1/4 0.208 mi. 1099 ft. **RIVERSIDE PRODUCE COMPANY** **LUST** **U001576290**
4271 MARKET ST **HIST UST** **N/A**
RIVERSIDE, CA 92501

Site 14 of 17 in cluster E

Relative: Higher

Actual: 836 ft.

LUST:

Region:	STATE
Global Id:	T0606503270
Latitude:	33.978115
Longitude:	-117.379062
Case Type:	LUST Cleanup Site
Status:	Open - Remediation
Status Date:	04/17/2008
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	VJB
Local Agency:	Not reported
RB Case Number:	083304025T
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	City redevelopment site - widespread soil/GW impacts. High BTEX, non-oxygenate site. LPH recovery initiated. VES/AS ongoing, with high mass removal per quarter. Brownfield grant exhausted, remainder of C/U being funded by RRA. Recent directive for soil vapor survey/RA and CSB.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606503270
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Regulatory Activities:

Global Id:	T0606503270
Action Type:	ENFORCEMENT
Date:	08/24/2006
Action:	Verbal Enforcement

Global Id: T0606503270

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Action Type: ENFORCEMENT
Date: 04/26/2006
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/18/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/25/2007
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 03/03/2009
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/08/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/09/2007
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/23/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/13/2007
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/07/2007
Action: Meeting

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/08/2007
Action: Other Report / Document

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2008
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2009

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/30/2009
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/29/2009
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/08/2006
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/11/2007
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2010
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/07/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/07/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/11/2010
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/02/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/11/2006
Action: Meeting

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/18/2006
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/24/2006
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/13/2006
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 12/12/2007
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2009
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/17/2008
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/02/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 03/04/2011
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/05/2010
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/16/2007
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Date: 06/24/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/15/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/21/2012
Action: Meeting

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2010
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 08/08/2008
Action: Correspondence

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/01/2009
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/01/2010
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/01/2011
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/25/2007
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/05/2008
Action: * Verbal Communication

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/16/2008
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/16/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/03/2012
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 03/22/2012
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/30/2007
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 12/03/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/17/2006
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/16/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/11/2009
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2010
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Date: 11/17/2008
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2008
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2008
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 12/04/2008
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/31/2011
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/31/2011
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2011
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/07/2013
Action: Staff Letter

Global Id: T0606503270
Action Type: RESPONSE
Date: 12/31/2007
Action: Final Remedial Action Report / Corrective Action Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 03/14/2012
Action: Remedial Progress Report

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/09/2006
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/30/2008
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/04/2010
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/06/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2006
Action: Well Installation Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 05/07/2007
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 08/25/2009
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 04/30/2009
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 12/02/2008
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/13/2009
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Date: 11/05/2009
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/17/2009
Action: Meeting

Global Id: T0606503270
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/06/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/30/2007
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/26/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/18/2011
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 12/11/2008
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 09/30/2009
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: RESPONSE
Date: 08/31/2009
Action: Verbal Communication

Global Id: T0606503270
Action Type: RESPONSE
Date: 08/30/2012
Action: Other Report / Document

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/14/2008
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/10/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 06/26/2007
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/25/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/31/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/17/2008
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 11/12/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 12/16/2008
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2010
Action: Remedial Progress Report

Global Id: T0606503270
Action Type: RESPONSE
Date: 07/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 08/11/2010
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Date: 10/15/2009
Action: Verbal Enforcement

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/01/2009
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 05/11/2009
Action: File review

Global Id: T0606503270
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 02/08/2008
Action: Staff Letter

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 04/19/2007
Action: * Verbal Communication

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 10/27/2009
Action: Meeting

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 01/22/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 03/03/2009
Action: File review

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 07/24/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0606503270
Action Type: ENFORCEMENT
Date: 09/03/2008
Action: File review

HIST UST:
Region: STATE
Facility ID: 00000067789

RIVERSIDE PRODUCE COMPANY (Continued) **U001576290**

Facility Type:	Other
Other Type:	JOBBER
Total Tanks:	0001
Contact Name:	Not reported
Telephone:	7146836420
Owner Name:	SAM MICELI
Owner Address:	4271 MARKET STREET
Owner City,St,Zip:	RIVERSIDE, CA 92501
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	6E
Tank Construction:	Unkown gauge
Leak Detection:	None

E81 **4267 MARKET** **US BROWNFIELDS** **1010698688**
ENE **4267 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.209 mi.
1106 ft. **Site 15 of 17 in cluster E**

Relative:
Higher

Actual:
836 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4267 MARKET
Property #:	215261005
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.978068
Longitude:	-117.378858
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64990
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Elmer & Jean D Hankins
Did owner change:	Not reported

4267 MARKET (Continued) **1010698688**

Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported

4267 MARKET (Continued) **1010698688**

Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717323

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

E82
ENE
1/8-1/4
0.209 mi.
1106 ft.

SHERWIN-WILLIAMS CO
4267 MARKET ST
RIVERSIDE, CA 92501

RCRA-SQG **1000371812**
FINDS **CAT000619221**
HAZNET

Site 16 of 17 in cluster E

Relative:
Higher

Actual:
836 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	SHERWIN-WILLIAMS CO
Facility address:	4267 MARKET ST RIVERSIDE, CA 92501
EPA ID:	CAT000619221
Mailing address:	MARKET ST RIVERSIDE, CA 92501
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	SHERWIN-WILLIAMS CO
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private

SHERWIN-WILLIAMS CO (Continued) **1000371812**

Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002944128

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
Year: 1993
Gepaid: CAT000619221
Contact: SHERWIN-WILLIAMS CO
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 4267 MARKET ST
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: Not reported
TSD EPA ID: CAD008302903
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Recycler
Tons: 0.68799999999
Facility County: Riverside

83	**LEWIS P M LABORATORIES#**	**RCRA-SQG**	**1000262342**
NE	**4121 BROCKTON AVE**	**FINDS**	**CAD010695492**
1/8-1/4	**RIVERSIDE, CA 92501**		
0.211 mi.			
1113 ft.			

Relative:
Higher

Actual:
834 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	LEWIS P M LABORATORIES#
Facility address:	4121 BROCKTON AVE RIVERSIDE, CA 92501
EPA ID:	CAD010695492
Contact:	ENVIRONMENTAL MANAGER
Contact address:	4121 BROCKTON AVE RIVERSIDE, CA 92501
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

LEWIS P M LABORATORIES# (Continued) **1000262342**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 08/18/1980
Facility name: LEWIS P M LABORATORIES#
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002638094

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

E84 **4282 MARKET** **US BROWNFIELDS** **1010695935**
ENE **4282 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.211 mi.
1116 ft. **Site 17 of 17 in cluster E**

Relative:
Higher

Actual:
836 ft.

US BROWNFIELDS:
Recipient name: Riverside Redevelopment Agency
Grant type: Assessment
Property name: 4282 MARKET
Property #: 215262018
Parcel size: 0.6
Property Description: Commercial
Latitude: 33.977814
Longitude: -117.378656
HCM label: Not reported
Map scale: Not reported
Point of reference: Not reported
Datum: Not reported
ACRES property ID: 65035
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 400
Assessment funding source: US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: Not reported

4282 MARKET (Continued) **1010695935**

Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Fairfield Home Inc.
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported

4282 MARKET (Continued) **1010695935**

Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717760

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

G85 **3843 12TH** **US BROWNFIELDS** **1010698672**
ENE **3843 12TH** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.215 mi.
1134 ft. **Site 7 of 7 in cluster G**

Relative:
Higher

Actual:
837 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3843 12TH
Property #:	215251006
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.978978
Longitude:	-117.378755
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64983
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301

3843 12TH (Continued) **1010698672**

Ownership entity:	Not reported
Current owner:	Sherry Lee Collins
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported

3843 12TH (Continued) **1010698672**

Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717252

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J86 ENE 1/8-1/4 0.225 mi. 1190 ft. | **4225 MARKET 4225 MARKET RIVERSIDE, CA 92501** | **US BROWNFIELDS FINDS** | **1010698678 N/A**

Site 1 of 13 in cluster J

Relative: Higher

Actual: 839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4225 MARKET
Property #:	215261004
Parcel size:	0.65
Property Description:	Commercial
Latitude:	33.978394
Longitude:	-117.378643
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64989
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Amy P & Raymond J Clark
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported

4225 MARKET (Continued) **1010698678**

Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

4225 MARKET (Continued) **1010698678**

FINDS:

Registry ID: 110038717314

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J87 **ALLEN FRANK** **EDR US Hist Auto Stat** **1009023451**
ENE **4214 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.236 mi.
1248 ft. **Site 2 of 13 in cluster J**

Relative:
Higher

Actual:
841 ft.

EDR Historical Auto Stations:

Name:	ALLEN FRANK
Year:	1951
Type:	AUTOMOBILE REPAIRING

J88 **4212 MARKET** **US BROWNFIELDS** **1010695680**
ENE **4212 MARKET** **FINDS** **N/A**
1/8-1/4 **RIVERSIDE, CA 92501**
0.237 mi.
1252 ft. **Site 3 of 13 in cluster J**

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4212 MARKET
Property #:	215262001
Parcel size:	Not reported
Property Description:	Commercial
Latitude:	33.978358
Longitude:	-117.378297
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65023
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment

4212 MARKET (Continued) **1010695680**

Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Richard Paul Bozner & Candyce Elene Trust
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported

4212 MARKET (Continued) **1010695680**

Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717644

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J89 **STEPANEK H W** **EDR US Hist Cleaners** **1009146955**
ENE **4212 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.237 mi.
1252 ft. **Site 4 of 13 in cluster J**

Relative:
Higher

Actual:
841 ft.

EDR Historical Cleaners:
Name: STEPANEK H W
Year: 1945
Type: FAMILY LAUNDRY WORK

J90 **HOLMES LE ROY** **EDR US Hist Auto Stat** **1009019691**
ENE **4212 MARKET ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.237 mi.
1252 ft. **Site 5 of 13 in cluster J**

Relative:
Higher

Actual:
841 ft.

EDR Historical Auto Stations:
Name: SUNSET PACIFIC OIL CO
Year: 1930
Type: GASOLINE AND OIL SERVICE STATIONS

Name: BELL BROTHERS
Year: 1936
Type: GAS AND OIL SERVICE STATIONS

Name: HOLMES LE ROY
Year: 1939
Type: GAS AND OIL SERVICE STATIONS

Name: MOWBRAY C G
Year: 1945
Type: AUTOMOBILE REPAIRING

Name: CASPERS MOBIL SERVICE
Year: 1951
Type: GASOLINE STATIONS

J91 ENE 1/8-1/4 0.239 mi. 1261 ft. | **FIRESTONE STORES #2768**
4199 MARKET ST
RIVERSIDE, CA 91501

HIST UST | **U001568314**
N/A

Site 6 of 13 in cluster J

Relative: Higher

Actual: 840 ft.

HIST UST:

Region:	STATE
Facility ID:	00000018334
Facility Type:	Other
Other Type:	AUTO SERVICE CENTER
Total Tanks:	0001
Contact Name:	BILL TAYLOR
Telephone:	7146864465
Owner Name:	FIRESTONE TIRE & RUBBER CO
Owner Address:	1200 FIRESTONE PARKWAY
Owner City,St,Zip:	AKRON, OH 44317
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	None

J92 ENE 1/8-1/4 0.239 mi. 1261 ft. | **4199 MARKET**
4199 MARKET
RIVERSIDE, CA 92501

US BROWNFIELDS FINDS | **1010698671**
N/A

Site 7 of 13 in cluster J

Relative: Higher

Actual: 840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4199 MARKET
Property #:	215251005
Parcel size:	0.39
Property Description:	Commercial
Latitude:	33.97877
Longitude:	-117.37834
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64982
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported

4199 MARKET (Continued) **1010698671**

Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Lavonne F Heinsen, James R Daughters & Ken Daughte
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	Y
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Y
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	Y
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported

4199 MARKET (Continued) **1010698671**

Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717243

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J93 **FIRESTONE AUTO SUPPLY & SERVICE STORES** **EDR US Hist Auto Stat** **1009021434**
ENE **4199 MARKET** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.239 mi.
1261 ft. **Site 8 of 13 in cluster J**

Relative:
Higher

Actual:
840 ft.

EDR Historical Auto Stations:
Name: FIRESTONE AUTO SUPPLY & SERVICE STORES
Year: 1936
Type: GAS AND OIL SERVICE STATIONS

Name: FIRESTONE TIRE & SERVICE CNTR
Year: 2001
Address: 4199 MARKET ST

Name: FIRESTONE TIRE & SERVICE CNTR
Year: 2002
Address: 4199 MARKET ST

Name: FIRESTONE TIRE & SERVICE CTR
Year: 2004
Address: 4199 MARKET ST

J94 **FIRESTONE STORES #2768** **CA FID UST** **S101618658**
ENE **4199 MARKET ST** **SWEEPS UST** **N/A**
1/8-1/4 **RIVERSIDE, CA 91501**
0.239 mi.
1261 ft. **Site 9 of 13 in cluster J**

Relative:
Higher

Actual:
840 ft.

CA FID UST:
Facility ID: 33002651
Regulated By: UTNKA
Regulated ID: 00018334
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7146864465
Mail To: Not reported

FIRESTONE STORES #2768 (Continued) **S101618658**

Mailing Address: 333 FLINT ST
Mailing Address 2: Not reported
Mailing City,St,Zip: RIVERSIDE 91501
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 18334
Number: 1
Board Of Equalization: 44-018048
Referral Date: 10-29-92
Action Date: 10-29-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 001372
Swrcb Tank Id: 33-000-018334-000001
Actv Date: 10-29-92
Capacity: 550
Tank Use: OIL
Stg: W
Content: WASTE OIL
Number Of Tanks: 1

K95 **GEISEL JOHN** **EDR US Hist Auto Stat** **1009023097**
East **3730 14TH ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.244 mi.
1286 ft. **Site 1 of 5 in cluster K**

Relative:
Higher

Actual:
837 ft.

EDR Historical Auto Stations:
Name: GEISEL JOHN
Year: 1939
Type: GAS AND OIL SERVICE STATIONS

K96 **GEISEL JOHN** **EDR US Hist Cleaners** **1009145510**
East **3730 14TH ST** **N/A**
1/8-1/4 **RIVERSIDE, CA**
0.244 mi.
1286 ft. **Site 2 of 5 in cluster K**

Relative:
Higher

Actual:
837 ft.

EDR Historical Cleaners:
Name: GEISEL JOHN
Year: 1945
Type: FAMILY LAUNDRY WORK

J97 ENE 1/8-1/4 0.245 mi. 1295 ft. — **WESTENHAVER & WOOD**, **4198 MARKET ST**, **RIVERSIDE, CA** — **EDR US Hist Auto Stat** — **1009019694** / **N/A**

Site 10 of 13 in cluster J

Relative: Higher

Actual: 841 ft.

EDR Historical Auto Stations:

Name:	WESTENHAVER & WOOD
Year:	1930
Type:	GASOLINE AND OIL SERVICE STATIONS

L98 South 1/8-1/4 0.246 mi. 1301 ft. — **RIVERSIDE CITY COLLEGE**, **4800 MAGNOLIA AVE**, **RIVERSIDE, CA 92506** — **HIST UST** — **U001576467** / **N/A**

Site 1 of 2 in cluster L

Relative: Higher

Actual: 848 ft.

HIST UST:

Region:	STATE
Facility ID:	00000040897
Facility Type:	Other
Other Type:	COLLEGE
Total Tanks:	0003
Contact Name:	SID GURROLA
Telephone:	7146843240
Owner Name:	RIVERSIDE CITY COLLEGE
Owner Address:	4800 MAGNOLIA AVE.
Owner City,St,Zip:	RIVERSIDE, CA 92506
Tank Num:	001
Container Num:	1
Year Installed:	1979
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Visual, Vapor Sniff Well
Tank Num:	002
Container Num:	2
Year Installed:	1979
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Visual, Vapor Sniff Well
Tank Num:	003
Container Num:	3
Year Installed:	1976
Tank Capacity:	00000550
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Visual

L99 South 1/8-1/4 0.246 mi. 1301 ft. | **RIVERSIDE CITY COLLEGE**
4800 MAGNOLIA AVE
RIVERSIDE, CA 92506 | **CA FID UST**
SWEEPS UST
EMI | **S101619601**
N/A

Site 2 of 2 in cluster L

Relative: Higher

Actual: 848 ft.

CA FID UST:

Facility ID:	33001128
Regulated By:	UTNKA
Regulated ID:	00040897
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7146843240
Mail To:	Not reported
Mailing Address:	4800 MAGNOLIA AVE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 92506
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	40897
Number:	1
Board Of Equalization:	44-018242
Referral Date:	06-21-90
Action Date:	06-21-90
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	000865
Swrcb Tank Id:	33-000-040897-000002
Actv Date:	06-21-90
Capacity:	1000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	2

Status:	Active
Comp Number:	40897
Number:	1
Board Of Equalization:	44-018242
Referral Date:	06-21-90
Action Date:	06-21-90
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	000865
Swrcb Tank Id:	33-000-040897-000003
Actv Date:	06-21-90
Capacity:	500
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL
Number Of Tanks:	Not reported

RIVERSIDE CITY COLLEGE (Continued) **S101619601**

EMI:

Year:	1987
County Code:	33
Air Basin:	SC
Facility ID:	17911
Air District Name:	SC
SIC Code:	8222
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	21
NOX - Oxides of Nitrogen Tons/Yr:	11
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	1

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	17911
Air District Name:	SC
SIC Code:	8222
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	26
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	33
Air Basin:	SC
Facility ID:	17911
Air District Name:	SC
SIC Code:	8222
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	3
NOX - Oxides of Nitrogen Tons/Yr:	1
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

M100 **3890 11TH** **US BROWNFIELDS** **1010698675**
NE **3890 11TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.253 mi.
1334 ft. **Site 1 of 6 in cluster M**

Relative:
Higher

Actual:
839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3890 11TH
Property #:	215251012
Parcel size:	0.82
Property Description:	Commercial
Latitude:	33.97991
Longitude:	-117.378717
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64986
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Riverside Legal & Prof Management
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3890 11TH (Continued) **1010698675**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717289

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

M101 **3891 11TH** **US BROWNFIELDS** **1010698423**
NE **3891 11TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.254 mi.
1343 ft. **Site 2 of 6 in cluster M**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3891 11TH
Property #:	215091010
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.980145
Longitude:	-117.378559
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64974
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Miller & Harding Rentals
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3891 11TH (Continued) **1010698423**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716994

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J102 **3780 12TH** **US BROWNFIELDS** **1010695681**
ENE **3780 12TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.255 mi.
1346 ft. **Site 11 of 13 in cluster J**

Relative:
Higher

Actual:
843 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3780 12TH
Property #:	215262002
Parcel size:	0.12
Property Description:	Commercial
Latitude:	33.978354
Longitude:	-117.37807
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65024
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	E L S Inv Clyde Smith
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3780 12TH (Continued) **1010695681**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717653

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

M103 **3875 11TH** **US BROWNFIELDS** **1010698424**
NE **3875 11TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.260 mi.
1373 ft. **Site 3 of 6 in cluster M**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3875 11TH
Property #:	215091011
Parcel size:	0.14
Property Description:	Commercial
Latitude:	33.980076
Longitude:	-117.378409
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64975
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Jesse L & Barbara Ann Valenzuela
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3875 11TH (Continued) **1010698424**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717001

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J104 **3770 12TH** **US BROWNFIELDS** **1010695682**
ENE **3770 12TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.261 mi.
1379 ft. **Site 12 of 13 in cluster J**

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3770 12TH
Property #:	215262003
Parcel size:	0.12
Property Description:	Commercial
Latitude:	33.978307
Longitude:	-117.377969
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65025
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	E L S Inv Clyde Smith
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3770 12TH (Continued) **1010695682**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717662

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

K105 East 1/4-1/2 0.265 mi. 1397 ft. | **FOAMY CAR WASH**
4401 MAIN ST
RIVERSIDE, CA | **LUST** | **S103821059**
N/A

Site 3 of 5 in cluster K

Relative: Higher

Actual: 839 ft.

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	960594
Employee:	Boltinghous-LOP
Site Closed:	Yes
Case Type:	Drinking Water Aquifer affected
Facility Status:	closed/action completed

K106 East 1/4-1/2 0.265 mi. 1401 ft. | **4399 MAIN**
4399 MAIN
RIVERSIDE, CA 92501 | **US BROWNFIELDS FINDS** | **1010698412**
N/A

Site 4 of 5 in cluster K

Relative: Higher

Actual: 839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4399 MAIN
Property #:	215272007
Parcel size:	Not reported
Property Description:	Commercial
Latitude:	33.976319
Longitude:	-117.378389
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64963
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Elias Teshome
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported

4399 MAIN (Continued) **1010698412**

IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716887

4399 MAIN (Continued) **1010698412**

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

J107 **3760 12TH** **US BROWNFIELDS** **1010695683**
ENE **3760 12TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.268 mi.
1413 ft. **Site 13 of 13 in cluster J**

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3760 12TH
Property #:	215262004
Parcel size:	0.12
Property Description:	Commercial
Latitude:	33.97826
Longitude:	-117.377868
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65026
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	E L S Inv Clyde Smith
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported

3760 12TH (Continued) **1010695683**

State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717671

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

M108 **3855 11TH** **US BROWNFIELDS** **1010698425**
NE **3855 11TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.268 mi.
1414 ft. **Site 4 of 6 in cluster M**

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3855 11TH
Property #:	215091012
Parcel size:	Not reported
Property Description:	Residential
Latitude:	33.979989
Longitude:	-117.378222
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64976
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Justin D Tracy
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3855 11TH (Continued) **1010698425**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717010

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

N109 ROME'S TIRE **HIST CORTESE** **1000221734**
ENE 4150 MARKET ST **LUST** **N/A**
1/4-1/2 RIVERSIDE, CA
0.268 mi.
1416 ft. **Site 1 of 4 in cluster N**

Relative:
Higher

Actual:
844 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083301058T

LUST:

Region:	STATE
Global Id:	T0606500106
Latitude:	33.979113
Longitude:	-117.3779599
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/01/1997
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	UNK
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083301058T
LOC Case Number:	88477
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline, Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500106
Contact Type:	Local Agency Caseworker
Contact Name:	UNK
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	Not reported
Phone Number:	Not reported

Global Id:	T0606500106
Contact Type:	Regional Board Caseworker
Contact Name:	NANCY OLSON-MARTIN
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	nolson-martin@waterboards.ca.gov
Phone Number:	Not reported

Regulatory Activities:

Global Id:	T0606500106
Action Type:	Other
Date:	01/01/1950
Action:	Leak Stopped

Global Id:	T0606500106
Action Type:	ENFORCEMENT

ROME'S TIRE (Continued) **1000221734**

Date: 03/31/1997
Action: File review - #RCDEH Upload Site File 9/7/2010

Global Id: T0606500106
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500106
Action Type: ENFORCEMENT
Date: 04/01/1997
Action: Closure/No Further Action Letter - #RCDEH0401

Global Id: T0606500106
Action Type: ENFORCEMENT
Date: 03/12/1997
Action: LOP Case Closure Summary to RB

Global Id: T0606500106
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500106
Action Type: REMEDIATION
Date: 01/01/1950
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606500106
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

LUST REG 8:
Region: 8
County: Riverside
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083301058T
Local Case Num: 88477
Case Type: Soil only
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Cross Street: 15TH
Enf Type: Not reported
Funding: State Funds
How Discovered: Tank Closure
How Stopped: Not reported
Leak Cause: UNK
Leak Source: UNK
Global ID: T0606500106
How Stopped Date: 6/1/1988
Enter Date: 10/27/1988
Review Date: Not reported

ROME'S TIRE (Continued) **1000221734**

Prelim Assess:	Not reported
Discover Date:	6/13/1988
Enforcement Date:	Not reported
Close Date:	4/1/1997
Workplan:	10/5/1989
Pollution Char:	8/1/1995
Remed Plan:	3/20/1996
Remed Action:	1/31/1989
Monitoring:	4/4/1989
Enter Date:	10/27/1988
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9789521
Longitude:	-117.3776893
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	NOM
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	PASSIVE SOIL VENT SYSTEM

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	88477
Employee:	Boltinghous-LOP
Site Closed:	Yes
Case Type:	Soil only
Facility Status:	closed/action completed

N110 **RIME'S TIRE SERVICE, INC.** **Notify 65** **S100178784**
ENE **4150 MARKET STREET** **N/A**
1/4-1/2 **RIVERSIDE, CA 90040**
0.268 mi.
1416 ft. **Site 2 of 4 in cluster N**

Relative:
Higher

Actual:
844 ft.

Notify 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Incident Description:	90040

K111 **4353 MAIN** **US BROWNFIELDS** **1010698411**
East **4353 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.271 mi.
1429 ft. **Site 5 of 5 in cluster K**

Relative:
Higher

Actual:
839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4353 MAIN
Property #:	215272006
Parcel size:	0.33
Property Description:	Commercial
Latitude:	33.976653
Longitude:	-117.378174
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64962
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John J Monjazi
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4353 MAIN (Continued) **1010698411**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716878

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

N112 ENE 1/4-1/2 0.273 mi. 1444 ft.

4135 MARKET
4135 MARKET
RIVERSIDE, CA 92501

Site 3 of 4 in cluster N

US BROWNFIELDS FINDS

1010698429
N/A

Relative: Higher

Actual: 843 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4135 MARKET
Property #:	215251004
Parcel size:	0.49
Property Description:	Commercial
Latitude:	33.97928
Longitude:	-117.378054
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64981
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	George R Freeman & William G Trust Was
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4135 MARKET (Continued) **1010698429**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717056

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

O113 **4329 MAIN** **US BROWNFIELDS** **1010698410**
East **4329 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.274 mi.
1445 ft. **Site 1 of 6 in cluster O**

Relative:
Higher

Actual:
839 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4329 MAIN
Property #:	215272005
Parcel size:	0.25
Property Description:	Commercial
Latitude:	33.976834
Longitude:	-117.378052
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64961
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	John J Monjazi
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4329 MAIN (Continued) **1010698410**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716869

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

M114 NE 1/4-1/2 0.277 mi. 1463 ft. | **4060 ALMOND**
4060 ALMOND
RIVERSIDE, CA 92501

Site 5 of 6 in cluster M

US BROWNFIELDS FINDS | **1010698422**
N/A

Relative: Higher

Actual: 840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4060 ALMOND
Property #:	215091009
Parcel size:	0.11
Property Description:	Commercial
Latitude:	33.980452
Longitude:	-117.378458
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64973
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Justin D Tracy
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4060 ALMOND (Continued) **1010698422**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716985

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

O115 East 1/4-1/2 0.277 mi. 1464 ft.

4307 MAIN
4307 MAIN
RIVERSIDE, CA 92501

Site 2 of 6 in cluster O

US BROWNFIELDS FINDS

1010695934
N/A

Relative: Higher

Actual: 840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4307 MAIN
Property #:	215272004
Parcel size:	0.23
Property Description:	Commercial
Latitude:	33.976999
Longitude:	-117.37794
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65043
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Christopher S Robertson
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4307 MAIN (Continued) **1010695934**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717840

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

O116 **4295 MAIN** **US BROWNFIELDS** **1010695689**
ENE **4295 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.280 mi.
1480 ft. **Site 3 of 6 in cluster O**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4295 MAIN
Property #:	215262010
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.977275
Longitude:	-117.377739
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65032
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	J F & James F Davidson
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4295 MAIN (Continued) **1010695689**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717733

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

117 NNW 1/4-1/2 0.281 mi. 1485 ft. | **EVERGREEN CEMETARY DISPOSAL SI**
4414 14TH STREET
RIVERSIDE, CA 92501 | **WMUDS/SWAT**
EMI | **S101614010**
N/A

Relative: Higher

Actual: 821 ft.

WMUDS/SWAT:

Edit Date:	Not reported
Complexity:	Not reported
Primary Waste:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Base Meridian:	SB
NPID:	Not reported
Tonnage:	0
Regional Board ID:	Not reported
Municipal Solid Waste:	False
Superorder:	False
Open To Public:	False
Waste List:	False
Agency Type:	Not reported
Agency Name:	EVERGREEN CEMETARY
Agency Department:	Not reported
Agency Address:	4414 14TH STREET
Agency City,St,Zip:	RIVERSIDE 92501
Agency Contact:	Not reported
Agency Telephone:	Not reported
Land Owner Name:	KENNETH A THOMAS (TREASUER)
Land Owner Address:	4414 14TH STREET
Land Owner City,St,Zip:	RIVERSIDE, CA 92501
Land Owner Contact:	Not reported
Land Owner Phone:	Not reported
Region:	8
Facility Type:	Not reported
Facility Description:	Not reported
Facility Telephone:	Not reported
SWAT Facility Name:	EVERGREEN CEMETARY DISPOSAL SITE
Primary SIC:	Not reported
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	Not reported
Waste Discharge System:	False
Solid Waste Assessment Test Program:	True
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	EVERGREEN CEMETARY
Threat to Water Quality:	Not reported
Sub Chapter 15:	False
Regional Board Project Officer:	MA
Number of WMUDS at Facility:	1
Section Range:	02s05w25
RCRA Facility:	Not reported
Waste Discharge Requirements:	Not reported
Self-Monitoring Rept. Frequency:	Not reported
Waste Discharge System ID:	8 330010NUR
Solid Waste Information ID:	33-AA-0033

EVERGREEN CEMETARY DISPOSAL SI (Continued) **S101614010**

EMI:

Year:	1987
County Code:	33
Air Basin:	SC
Facility ID:	21307
Air District Name:	SC
SIC Code:	7261
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	21307
Air District Name:	SC
SIC Code:	0
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	1
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

O118 **4281 MAIN** **US BROWNFIELDS** **1010695927**
ENE **4281 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.283 mi.
1496 ft. **Site 4 of 6 in cluster O**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4281 MAIN
Property #:	215262014
Parcel size:	0.09
Property Description:	Commercial
Latitude:	33.977389
Longitude:	-117.377679
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65033
Start date:	Not reported
Completed date:	Not reported

4281 MAIN (Continued) **1010695927**

Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Richard P Faulkner & James E Egan
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported

4281 MAIN (Continued) **1010695927**

Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717742

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

P119 **3732 12TH** **US BROWNFIELDS** **1010695684**
ENE **3732 12TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.286 mi.
1508 ft. **Site 1 of 4 in cluster P**

Relative:
Higher

Actual:
845 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3732 12TH
Property #:	215262005
Parcel size:	0.12
Property Description:	Commercial
Latitude:	33.978128
Longitude:	-117.377585
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65027
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement

3732 12TH (Continued) **1010695684**

Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Hae Kwan & Oh Bok Yang
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported

3732 12TH (Continued) **1010695684**

VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717680

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

O120 **4267 MAIN** **US BROWNFIELDS** **1010695688**
ENE **4267 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.287 mi.
1515 ft. **Site 5 of 6 in cluster O**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4267 MAIN
Property #:	215262009
Parcel size:	Not reported
Property Description:	Commercial
Latitude:	33.977497
Longitude:	-117.377606
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65031
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported

4267 MAIN (Continued) **1010695688**

Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Mario & Rosa Maria Cortez
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported

4267 MAIN (Continued) **1010695688**

Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: Not reported
Future use greenspace acreage: Not reported
Future use residential acreage: Not reported
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717724

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

O121 **4261 MAIN** **US BROWNFIELDS** **1010695687**
ENE **4261 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.289 mi.
1524 ft. **Site 6 of 6 in cluster O**

Relative:
Higher

Actual:
840 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4261 MAIN
Property #:	215262008
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.977544
Longitude:	-117.377575
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65030
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301

4261 MAIN (Continued) **1010695687**

Ownership entity:	Not reported
Current owner:	Blueskyland
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported

4261 MAIN (Continued) **1010695687**

Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FINDS:

Registry ID: 110038717715

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

P122 **4255 MAIN** **US BROWNFIELDS** **1010695686**
ENE **4255 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.290 mi.
1531 ft. **Site 2 of 4 in cluster P**

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4255 MAIN
Property #:	215262007
Parcel size:	0.16
Property Description:	Commercial
Latitude:	33.97759
Longitude:	-117.377544
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65029
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ivan C & Vivian M Metschke
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported

4255 MAIN (Continued) **1010695686**

Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

4255 MAIN (Continued) **1010695686**

FINDS:

Registry ID: 110038717706

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

N123
ENE
1/4-1/2
0.296 mi.
1563 ft.

4093 MARKET
4093 MARKET
RIVERSIDE, CA 92501

US BROWNFIELDS **1010698427**
FINDS **N/A**

Site 4 of 4 in cluster N

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4093 MARKET
Property #:	215091014
Parcel size:	0.49
Property Description:	Commercial
Latitude:	33.979793
Longitude:	-117.377713
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64978
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Justin D Tracy
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported

4093 MARKET (Continued) **1010698427**

IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717038

Environmental Interest/Information System

4093 MARKET (Continued) **1010698427**

US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

P124 **4229 MAIN** **US BROWNFIELDS** **1010695685**
ENE **4229 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.298 mi.
1573 ft. **Site 3 of 4 in cluster P**

Relative:
Higher

Actual:
842 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4229 MAIN
Property #:	215262006
Parcel size:	0.17
Property Description:	Commercial
Latitude:	33.977791
Longitude:	-117.37741
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65028
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ivan C & Vivian M Metschke
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported

4229 MAIN (Continued) **1010695685**

Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717699

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

M125 **4040 ALMOND** **US BROWNFIELDS** **1010698416**
NE **4040 ALMOND** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.300 mi.
1582 ft. **Site 6 of 6 in cluster M**

Relative:
Higher

Actual:
841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4040 ALMOND
Property #:	215091002
Parcel size:	0.08
Property Description:	Commercial
Latitude:	33.980596
Longitude:	-117.378363
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64967
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Gary Kaye & Diana Renteria
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4040 ALMOND (Continued) **1010698416**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716921

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

P126 **4213 MAIN** **US BROWNFIELDS** **1010695928**
ENE **4213 MAIN** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.303 mi.
1600 ft. **Site 4 of 4 in cluster P**

Relative:
Higher

Actual:
844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4213 MAIN
Property #:	215262015
Parcel size:	0.15
Property Description:	Commercial
Latitude:	33.977917
Longitude:	-117.377319
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65034
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Debbie S Marquez
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4213 MAIN (Continued) **1010695928**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	N
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717751

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Q127 NE 1/4-1/2 0.321 mi. 1695 ft. | **3890 10TH**
3890 10TH
RIVERSIDE, CA 92501

Site 1 of 2 in cluster Q

US BROWNFIELDS FINDS | **1010698415**
N/A

Relative: Higher

Actual: 841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3890 10TH
Property #:	215091001
Parcel size:	0.15
Property Description:	Commercial
Latitude:	33.98085
Longitude:	-117.378109
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64966
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Gregory G & Ericka M Rizio
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3890 10TH (Continued) **1010698415**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716912

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Q128 NE 1/4-1/2 0.326 mi. 1720 ft. | **3872 10TH**
3872 10TH
RIVERSIDE, CA 92501

Site 2 of 2 in cluster Q

US BROWNFIELDS FINDS | **1010698417**
N/A

Relative: Higher

Actual: 841 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3872 10TH
Property #:	215091003
Parcel size:	0.24
Property Description:	Commercial
Latitude:	33.980774
Longitude:	-117.377936
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64968
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Tony Jimenez
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3872 10TH (Continued) **1010698417**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716930

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

R129 ENE 1/4-1/2 0.330 mi. 1740 ft.

4035 MARKET
4035 MARKET
RIVERSIDE, CA 92501

Site 1 of 6 in cluster R

US BROWNFIELDS FINDS

1010698421
N/A

Relative: Higher

Actual: 844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4035 MARKET
Property #:	215091008
Parcel size:	0.05
Property Description:	Commercial
Latitude:	33.980234
Longitude:	-117.377421
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64972
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Suzanne A Wilson
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4035 MARKET (Continued) **1010698421**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716976

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

R130 NE 1/4-1/2 0.339 mi. 1791 ft. | **4019 MARKET**
4019 MARKET
RIVERSIDE, CA 92501

US BROWNFIELDS FINDS | **1010698420 N/A**

Site 2 of 6 in cluster R

Relative: Higher

Actual: 844 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4019 MARKET
Property #:	215091007
Parcel size:	0.15
Property Description:	Commercial
Latitude:	33.980355
Longitude:	-117.37734
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	64971
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Suzanne A Wilson
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4019 MARKET (Continued) **1010698420**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038716967

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

S131 East 1/4-1/2 0.356 mi. 1881 ft. | **TRANSPORTATION CENTER (RIVERSI 4293 ORANGE ST RIVERSIDE, CA 92501** | **LUST HIST UST** | **U001576297 N/A**

Site 1 of 2 in cluster S

Relative: Higher

Actual: 852 ft.

LUST:

Region:	STATE
Global Id:	T0606500194
Latitude:	33.9765612
Longitude:	-117.3764192
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/01/2010
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	RS
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083301572T
LOC Case Number:	90539
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	An unauthorized release of gasoline occurred at the site. The release was discovered on June 14, 1990 in response to complaints of nuisance conditions created from a piping leak. Product was observed seeping out of cracks in the concrete surface. The piping leak was caused by corrosion of the piping section near the eastern dispenser island. Samples collected from the excavation repair trench on June 15, 1990 indicated 180,000 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons as gasoline (TPH-g) in soil at 6 feet. This represents the worst case conditions at the site prior to remediation as shown on the table in Section III above. However, the samples were not analyzed for volatile organics. The piping leak was repaired with excavated soil returned as backfill. From August 14 to 24, 1990, a preliminary assessment was performed consisting of four vertical borings around the dispensers and one slant boring beneath the eastern dispenser piping (ESE, October 5, 1990). The highest concentrations of the detected aromatic volatile organic compounds: benzene, toluene, ethylbenzene and xylenes (BTEX) are shown on the table in Section III above. Although these were the highest concentrations of BTEX detected, they may not represent the worst case conditions prior to remediation. For example, benzene was 240 mg/kg and the sample contained 8,000 mg/kg of TPH-g. The samples were not analyzed for the full suite of volatile organic compounds. In January and May 1992, corrective action plans were submitted. From January to November 1992, A Phase II Environmental Assessment was conducted that consisted of installing four vapor extraction wells, two vapor monitoring well clusters, three groundwater monitoring wells and several cone penetrometer borings, conducting a vapor extraction test and performing multiple phases of soil vapor sampling (ESE, January 18, 1993). The highest concentration of benzene detected was 1,200 micrograms per liter (lJg/l) in the groundwater sample collected from MW2 on November 28, 1992. The compound, 1,1,1-trichloroethane, was detected at its highest concentration represented on the table. In April 1993, one groundwater monitoring well and four vapor wells were installed (ESE, October 15, 1993). The wells were designed to meet additional assessment requirements and provide support to the existing vapor extraction system. Groundwater monitoring was conducted from November 1992 until May 2000. The

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

groundwater beneath the site has ranged from a depth of approximately 60 to 77 feet below surface. Low levels (less than 50 micrograms per liter [lJg/l]) of chlorinated hydrocarbons have been detected in the groundwater historically at this site. The highest concentrations of TPH-g and benzene reported were 19,000 and 4,000 IJg/1 in December 1993. According to the groundwater monitoring report, dated May 30, 2000, TPH-g (410 IJg/I) and benzene (0.96 IJg/I) were detected in one well. No other fuel constituents were detected in groundwater in May of 2000. MtBE and the other fuel oxygenates have never been detected in groundwater. Post remedial groundwater monitoring was conducted on May 6, 2008. TPH-g and BTEX were not detected. Low levels of chlorinated compounds were detected at concentrations less than 5 IJg/1. Vapor extraction was conducted intermittently from September 1992 until May 10, 1999 (total operation period of 5 years and 4 months). This vapor extraction effort removed 3,336 pounds of hydrocarbon Riverside County Garage - 5 - July 1, 2010 vapors from the subsurface. During vapor extraction efforts, the highest concentration of benzene reported was 760 ppmv in August 1993 and the highest TPH-g was 15,000 ppmv in January 1994. During a 3-day vapor extraction test conducted in August 2000, neither benzene nor MTBE were detected in the vapor samples collected from the four vapor wells throughout the test. The highest concentration of TPH-g was 1,638 parts per million by volume ppmv. Since 1997, th

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500194
Contact Type:	Regional Board Caseworker
Contact Name:	ROSE SCOTT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	rscott@waterboards.ca.gov
Phone Number:	9513206375

Global Id:	T0606500194
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	sbolting@rivcocha.org
Phone Number:	9519558982

Regulatory Activities:

Global Id:	T0606500194
Action Type:	ENFORCEMENT
Date:	06/05/2003
Action:	Staff Letter

Global Id:	T0606500194
Action Type:	ENFORCEMENT
Date:	03/18/2006
Action:	Verbal Enforcement

Global Id:	T0606500194

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

Action Type: ENFORCEMENT
Date: 01/12/2010
Action: Staff Letter

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/05/2010
Action: Meeting

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/21/2010
Action: Staff Letter

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/21/2010
Action: Notification - Preclosure

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/22/2005
Action: * No Action

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/22/2005
Action: * No Action

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/19/2005
Action: * No Action

Global Id: T0606500194
Action Type: RESPONSE
Date: 07/15/2006
Action: Soil and Water Investigation Workplan

Global Id: T0606500194
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500194
Action Type: RESPONSE
Date: 03/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/01/2010
Action: Closure/No Further Action Letter

Global Id: T0606500194
Action Type: RESPONSE
Date: 10/01/2005

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

Action: Soil and Water Investigation Report

Global Id: T0606500194
Action Type: RESPONSE
Date: 09/15/2005
Action: Soil and Water Investigation Workplan

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/28/2009
Action: File review

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 08/20/2009
Action: Verbal Enforcement

Global Id: T0606500194
Action Type: RESPONSE
Date: 07/11/2005
Action: Other Report / Document

Global Id: T0606500194
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0606500194
Action Type: RESPONSE
Date: 04/04/2005
Action: Other Report / Document

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 03/03/2003
Action: * Historical Enforcement

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/31/2003
Action: Staff Letter

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 04/30/2008
Action: Meeting

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 06/12/2008
Action: Staff Letter

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 06/05/2008
Action: Staff Letter

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

Global Id: T0606500194
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0606500194
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 07/01/2010
Action: Staff Letter

Global Id: T0606500194
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0606500194
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 03/12/2003
Action: * Verbal Communication

Global Id: T0606500194
Action Type: ENFORCEMENT
Date: 01/08/2009
Action: Technical Correspondence / Assistance / Other

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 90539
Employee: Boltinghous-LOP
Site Closed: Referred to Water Board
Case Type: Drinking Water Aquifer affected
Facility Status: 0

HIST UST:
Region: STATE
Facility ID: 00000064692
Facility Type: Gas Station
Other Type: VEHICLE REPAIR SHOPS
Total Tanks: 0004
Contact Name: ARDELL ROUSE
Telephone: 7147876322
Owner Name: COUNTY OF RIVERSIDE, AUTOMOTIV
Owner Address: 4293 ORANGE ST.
Owner City,St,Zip: RIVERSIDE, CA 92501

TRANSPORTATION CENTER (RIVERSI (Continued) **U001576297**

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00000300
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Visual

S132 **COUNTY GARAGE (RIVERSIDE)** **HIST CORTESE** **S101589849**
East **4293 ORANGE ST** **LUST** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501** **CA FID UST**
0.356 mi. **SWEEPS UST**
1881 ft. **Site 2 of 2 in cluster S** **EMI**

Relative:
Higher

Actual:
852 ft.

CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 083301572T

LUST REG 8:
Region: 8
County: Riverside
Regional Board: Santa Ana Region
Facility Status: Remedial action (cleanup) Underway
Case Number: 083301572T
Local Case Num: 90539
Case Type: Aquifer affected
Substance: Gasoline

COUNTY GARAGE (RIVERSIDE) (Continued) **S101589849**

Qty Leaked:	Not reported
Abate Method:	Vapor Extraction
Cross Street:	12TH
Enf Type:	SEL
Funding:	Not reported
How Discovered:	Nuisance Conditions
How Stopped:	Not reported
Leak Cause:	Corrosion
Leak Source:	Piping
Global ID:	T0606500194
How Stopped Date:	Not reported
Enter Date:	6/26/1990
Review Date:	Not reported
Prelim Assess:	6/28/1990
Discover Date:	6/14/1990
Enforcement Date:	1/1/1965
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	5/29/1992
Remed Action:	7/15/1993
Monitoring:	Not reported
Enter Date:	6/26/1990
GW Qualifies:	<
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9765612
Longitude:	-117.3764192
MTBE Date:	3/5/1999
Max MTBE GW:	10
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	B
Staff:	RS
Staff Initials:	SCB
Lead Agency:	Regional Board
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	33000275
Regulated By:	UTNKA
Regulated ID:	00064692
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7147876322
Mail To:	Not reported

COUNTY GARAGE (RIVERSIDE) (Continued) **S101589849**

Mailing Address: 4293 ORANGE ST
Mailing Address 2: Not reported
Mailing City,St,Zip: RIVERSIDE 92501
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 64692
Number: 4
Board Of Equalization: 44-017841
Referral Date: 10-29-92
Action Date: 10-29-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 001055
Swrcb Tank Id: 33-000-064692-000001
Actv Date: 10-29-92
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 5

Status: Active
Comp Number: 64692
Number: 4
Board Of Equalization: 44-017841
Referral Date: 10-29-92
Action Date: 10-29-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 001055
Swrcb Tank Id: 33-000-064692-000002
Actv Date: 10-29-92
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 64692
Number: 4
Board Of Equalization: 44-017841
Referral Date: 10-29-92
Action Date: 10-29-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 001055
Swrcb Tank Id: 33-000-064692-000003
Actv Date: 10-29-92

COUNTY GARAGE (RIVERSIDE) (Continued) **S101589849**

Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	64692
Number:	4
Board Of Equalization:	44-017841
Referral Date:	10-29-92
Action Date:	10-29-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	001055
Swrcb Tank Id:	33-000-064692-000004
Actv Date:	10-29-92
Capacity:	300
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	64692
Number:	4
Board Of Equalization:	44-017841
Referral Date:	10-29-92
Action Date:	10-29-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	001055
Swrcb Tank Id:	33-000-064692-000005
Actv Date:	10-29-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	METHANOL
Number Of Tanks:	Not reported

EMI:

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	31717
Air District Name:	SC
SIC Code:	9621
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

R133 ENE 1/4-1/2 0.357 mi. 1887 ft.

3796 10TH
3796 10TH
RIVERSIDE, CA 92501

Site 3 of 6 in cluster R

US BROWNFIELDS FINDS

1010695664
N/A

Relative: Higher

Actual: 845 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3796 10TH
Property #:	215092001
Parcel size:	0.07
Property Description:	Commercial
Latitude:	33.980353
Longitude:	-117.376953
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65005
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Sang Y & Kyung Sook Kim
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3796 10TH (Continued) **1010695664**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717485

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T134 ENE 1/4-1/2 0.359 mi. 1895 ft.

4075 MAIN
4075 MAIN
RIVERSIDE, CA 92501

Site 1 of 5 in cluster T

US BROWNFIELDS FINDS

1010695675
N/A

Relative: Higher

Actual: 849 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4075 MAIN
Property #:	215092012
Parcel size:	0.47
Property Description:	Commercial
Latitude:	33.979347
Longitude:	-117.376355
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65015
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	County of Riverside
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4075 MAIN (Continued) **1010695675**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717582

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T135 ENE 1/4-1/2 0.365 mi. 1928 ft.

4049 MAIN
4049 MAIN
RIVERSIDE, CA 92501

Site 2 of 5 in cluster T

US BROWNFIELDS FINDS

1010695674
N/A

Relative: Higher

Actual: 849 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4049 MAIN
Property #:	215092011
Parcel size:	0.18
Property Description:	Commercial
Latitude:	33.979542
Longitude:	-117.376226
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65014
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ernest A Zinke & Alma Trust Fershko, H Grace
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4049 MAIN (Continued) **1010695674**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717573

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

R136 ENE 1/4-1/2 0.367 mi. 1939 ft. | **3774 10TH**
3774 10TH
RIVERSIDE, CA 92501

Site 4 of 6 in cluster R

US BROWNFIELDS FINDS | **1010695666**
N/A

Relative: Higher

Actual: 846 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3774 10TH
Property #:	215092002
Parcel size:	0.09
Property Description:	Commercial
Latitude:	33.980236
Longitude:	-117.376741
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65006
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Sang Y & Kyung Sook Kim
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3774 10TH (Continued) **1010695666**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717494

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

R137 **3768 10TH** **US BROWNFIELDS** **1010695667**
ENE **3768 10TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.370 mi.
1954 ft. **Site 5 of 6 in cluster R**

Relative:
Higher

Actual:
847 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3768 10TH
Property #:	215092003
Parcel size:	0.14
Property Description:	Commercial
Latitude:	33.980208
Longitude:	-117.37668
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65007
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Tony Jimenez
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3768 10TH (Continued) **1010695667**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717500

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T138 ENE 1/4-1/2 0.373 mi. 1971 ft.

4015 MAIN
4015 MAIN
RIVERSIDE, CA 92501

Site 3 of 5 in cluster T

US BROWNFIELDS FINDS

1010695672
N/A

Relative: Higher

Actual: 849 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4015 MAIN
Property #:	215092009
Parcel size:	0.22
Property Description:	Commercial
Latitude:	33.979798
Longitude:	-117.376058
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65012
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Ernest A Zinke & Alma Trust Fershko, H Grace
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4015 MAIN (Continued) **1010695672**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	N
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717555

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

R139 **3760 10TH** **US BROWNFIELDS** **1010695668**
ENE **3760 10TH** **FINDS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.374 mi.
1974 ft. **Site 6 of 6 in cluster R**

Relative:
Higher

Actual:
847 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	3760 10TH
Property #:	215092004
Parcel size:	0.14
Property Description:	Commercial
Latitude:	33.98017
Longitude:	-117.3766
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65008
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	Kay B & Evelyn L Tillman
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

3760 10TH (Continued) **1010695668**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	N
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	N
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	N
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	N
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Y
VOCs cleaned:	N
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717519

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T140 ENE 1/4-1/2 0.377 mi. 1989 ft.

4001 MAIN
4001 MAIN
RIVERSIDE, CA 92501

Site 4 of 5 in cluster T

US BROWNFIELDS FINDS

1010695671
N/A

Relative: Higher

Actual: 849 ft.

US BROWNFIELDS:

Recipient name:	Riverside Redevelopment Agency
Grant type:	Assessment
Property name:	4001 MAIN
Property #:	215092008
Parcel size:	0.15
Property Description:	Commercial
Latitude:	33.979883
Longitude:	-117.375944
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	65011
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	400
Assessment funding source:	US EPA - Brownfields Assessment Cooperative Agreement
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	Not reported
Cleanup funding entity:	Not reported
Grant type:	N/A
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	96986301
Ownership entity:	Not reported
Current owner:	County of Riverside
Did owner change:	Not reported
Cleanup required:	Not reported
Video available:	Not reported
Photo available:	Not reported
Institutional controls required:	Not reported
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	N
Controled substance cleaned:	Not reported

4001 MAIN (Continued) **1010695671**

Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	N
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	N
Other metals cleaned:	Not reported
Other contaminants found:	N
Other contams found description:	Not reported
PAHs found:	N
PAHs cleaned up:	Not reported
PCBs found:	N
PCBs cleaned up:	Not reported
Petro products found:	N
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	N
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

FINDS:

Registry ID: 110038717546

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

T141 ENE 1/4-1/2 0.385 mi. 2035 ft. | **GRIN CHEMICAL COMPANY**
3972 MAIN STREET
RIVERSIDE, CA 92501

ENVIROSTOR | **S100201721**
N/A

Site 5 of 5 in cluster T

Relative: Higher

Actual: 848 ft.

ENVIROSTOR:

Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Not reported
Division Branch:	Cleanup Cypress
Facility ID:	33280007
Site Code:	Not reported
Assembly:	61
Senate:	31
Special Program:	* Site Char & Assess Grant (CERCLA 104)
Status:	No Further Action
Status Date:	04/01/1985
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.98194
Longitude:	-117.3744
APN:	NONE SPECIFIED
Past Use:	NONE
Potential COC:	NONE SPECIFIED,31000
Confirmed COC:	31000-NO
Potential Description:	NMA
Alias Name:	ANTIMITE ASSOCIATES
Alias Type:	Alternate Name
Alias Name:	ATLASTA TRANSFORMER CO
Alias Type:	Alternate Name
Alias Name:	BADER TERMINEX COMPANY
Alias Type:	Alternate Name
Alias Name:	BEST MAINTENANCE SUPPLY CO
Alias Type:	Alternate Name
Alias Name:	BREWER & WILSON TERMITE CONTROL
Alias Type:	Alternate Name
Alias Name:	C B BELDEN TERMITE CONTROL
Alias Type:	Alternate Name
Alias Name:	RIVERSIDE CITY HALL
Alias Type:	Alternate Name
Alias Name:	CAD980884951
Alias Type:	EPA Identification Number
Alias Name:	33280007
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Assessment Report
Completed Date:	04/01/1985
Comments:	T/C W/ F.NALL, CITY SENIOR PLANNER - GRIN HAD AN OFFICE IN 3-STORY BLDG.BEFOR CITY HALL CONSTRUCTED. SUBMIT TO EPA PRELIM ASSESS DONE CERCLA 104

GRIN CHEMICAL COMPANY (Continued) **S100201721**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Discovery
Completed Date:	12/16/1982
Comments:	FACILITY IDENTIFIED ID FROM OLD PHONE BOOK SEARCH 1950,1955
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

U142 **RSDE COUNTY ADMINISTRATIVE CTR** **HIST CORTESE** **S101589950**
ENE **4080 LEMON ST** **LUST** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501** **CA FID UST**
0.488 mi. **SWEEPS UST**
2574 ft. **Site 1 of 2 in cluster U** **EMI**

Relative:
Higher

Actual:
853 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	083303037T

LUST REG 8:

Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083303037T
Local Case Num:	970744
Case Type:	Soil only
Substance:	Diesel
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	10TH
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0606500500
How Stopped Date:	Not reported
Enter Date:	8/29/1997
Review Date:	7/14/1997
Prelim Assess:	Not reported
Discover Date:	7/14/1997
Enforcement Date:	Not reported
Close Date:	4/21/1998
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported

RSDE COUNTY ADMINISTRATIVE CTR (Continued) **S101589950**

Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	8/29/1997
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.9778422
Longitude:	-117.3737662
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	VJJ
Staff Initials:	UNK
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

CA FID UST:

Facility ID:	33001655
Regulated By:	UTNKA
Regulated ID:	00032207
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7147872452
Mail To:	Not reported
Mailing Address:	4080 LEMON ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RIVERSIDE 92501
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	32207
Number:	4
Board Of Equalization:	44-018155
Referral Date:	04-19-89
Action Date:	04-19-89
Created Date:	02-29-88

RSDE COUNTY ADMINISTRATIVE CTR (Continued) **S101589950**

Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	33-000-032207-000001
Actv Date:	07-01-85
Capacity:	500
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	1

EMI:

Year:	1987
County Code:	33
Air Basin:	SC
Facility ID:	684
Air District Name:	SC
SIC Code:	4463
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	6
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	684
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	33
Air Basin:	SC
Facility ID:	684
Air District Name:	SC
SIC Code:	9199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0

RSDE COUNTY ADMINISTRATIVE CTR (Continued) **S101589950**

NOX - Oxides of Nitrogen Tons/Yr:	1
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

U143 **LUST** **S100217488**
ENE **4080 LEMON** **CHMIRS** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.488 mi.
2574 ft. **Site 2 of 2 in cluster U**

Relative:
Higher

Actual:
853 ft.

LUST:

Region:	STATE
Global Id:	T0606500500
Latitude:	33.9781529
Longitude:	-117.3739264
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/21/1998
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	SCB
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	083303037T
LOC Case Number:	970744
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606500500
Contact Type:	Local Agency Caseworker
Contact Name:	SHARON BOLTINGHOUSE
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	sbolting@rivcocha.org
Phone Number:	9519558982

Global Id:	T0606500500
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	vjahn-bull@waterboards.ca.gov
Phone Number:	9517824903

Regulatory Activities:

Global Id:	T0606500500
Action Type:	ENFORCEMENT
Date:	04/21/1998
Action:	Closure/No Further Action Letter - #RCDEH0421

Global Id:	T0606500500
Action Type:	Other

(Continued) **S100217488**

Date: 01/01/1950
Action: Leak Stopped

Global Id: T0606500500
Action Type: ENFORCEMENT
Date: 04/20/1998
Action: File review - #RCDEH Upload Site File 9/14/2010

Global Id: T0606500500
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0606500500
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 970744
Employee: Boltinghous-LOP
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed

CHMIRS:
OES Incident Number: 8907085
OES notification: Not reported
OES Date: Not reported
OES Time: Not reported
Incident Date: 18-JUL-89
Date Completed: 18-JUL-89
Property Use: 500
Agency Id Number: 33075
Agency Incident Number: 8909766
Time Notified: 1558
Time Completed: 2104
Surrounding Area: 500
Estimated Temperature: 85
Property Management: K
Special Studies 1: Not reported
Special Studies 2: Not reported
Special Studies 3: Not reported
Special Studies 4: Not reported
Special Studies 5: Not reported
Special Studies 6: Not reported
More Than Two Substances Involved?: N
Resp Agncy Personel # Of Decontaminated: 0
Responding Agency Personel # Of Injuries: 0
Responding Agency Personel # Of Fatalities: 0
Others Number Of Decontaminated: 0
Others Number Of Injuries: 0
Others Number Of Fatalities: 0
Vehicle Make/year: Not reported

(Continued) **S100217488**

Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	STEVE EARLEY #26000
Report Date:	18-JUL-89
Comments:	Not reported
Facility Telephone:	714 782-5311
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Not reported
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	88-92
Agency:	Not reported
Incident Date:	Not reported
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Not reported
Site Type:	Not reported
E Date:	16-MAY-90
Substance:	Not reported
Quantity Released:	Not reported
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
Description:	Not reported

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144 **MARKET STREET PROPERTIES** **SLIC** **S111012725**
NE **3801 MARKET STREET** **N/A**
1/4-1/2 **RIVERSIDE, CA 92501**
0.490 mi.
2589 ft.

Relative:
Higher

Actual:
847 ft.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	11/03/2011
Global Id:	T10000003053

MARKET STREET PROPERTIES (Continued) **S111012725**

Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	Not reported
Latitude:	33.982438
Longitude:	-117.376206
Case Type:	Cleanup Program Site
Case Worker:	KS
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Regional Board
Potential Media Affected:	Not reported
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

145
NE
1/2-1
0.534 mi.
2819 ft.

STEARNS DOWNTOWN LIQUOR **Notify 65** **S100231512**
4029 7TH **N/A**
RIVERSIDE, CA 90040

Relative:
Higher

Actual:
842 ft.

Notify 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Incident Description:	90040

146
ESE
1/2-1
0.719 mi.
3797 ft.

FAIRFIELD CHEMICALS **ENVIROSTOR** **S109422426**
3075 14TH ST **N/A**
RIVERSIDE, CA 92507

Relative:
Higher

Actual:
874 ft.

ENVIROSTOR:

Site Type:	Evaluation
Site Type Detailed:	Evaluation
Acres:	7.45
NPL:	NO
Regulatory Agencies:	SMBRP, US EPA
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	* Greg Holmes
Division Branch:	Cleanup Cypress
Facility ID:	60000221
Site Code:	Not reported
Assembly:	61
Senate:	31
Special Program:	EPA - PASI
Status:	Inactive - Needs Evaluation
Status Date:	03/06/2006
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not Applicable
Latitude:	33.96983

FAIRFIELD CHEMICALS (Continued) **S109422426**

Longitude: -117.3741
APN: 211231023
Past Use: FUEL - AIRCRAFT STORAGE/ REFUELING
Potential COC: 30017
Confirmed COC: 30017-NO
Potential Description: NONE SPECIFIED
Alias Name: 211231023
Alias Type: APN
Alias Name: CAN000908323
Alias Type: EPA Identification Number
Alias Name: 60000221
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 06/13/2006
Comments: EPA concurrence June 13, 2006

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

147
East
1/2-1
0.801 mi.
4229 ft.

RIVERSIDE GAS AND ELECTRIC LIGHT CO **EDR MGP** **1008407743**
3084 E. 10TH STREET **N/A**
RIVERSIDE, CA 92507

Relative:
Higher

Actual:
872 ft.

Manufactured Gas Plants:
Alternate Name:EDISON ELECTRIC LIGHT GO-GAS WORKS;SOUTHERN CAL GAS. No additional information available

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148
East
1/2-1
0.878 mi.
4637 ft.

SO CAL GAS/RIVERSIDE MGP **DEED** **S101481581**
10TH STREET AND HOWARD **VCP** **N/A**
RIVERSIDE, CA 92507 **ENVIROSTOR**

Relative:
Higher

Actual:
873 ft.

DEED:
Area: PROJECT WIDE
Sub Area: Not reported
Site Type: VOLUNTARY CLEANUP
Status: ACTIVE
Deed Date(s): 06/01/2012

VCP:
Facility ID: 33490085
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Site Mgmt. Req.:	NONE SPECIFIED
Acres:	1.2
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Tedd Yargeau
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Site Code:	400964
Assembly:	61
Senate:	31
Special Programs Code:	Voluntary Cleanup Program
Status:	Active
Status Date:	10/22/1997
Restricted Use:	YES
Funding:	Responsible Party
Lat/Long:	33.975 / -117.368
APN:	211-201-004, 211-201-039
Past Use:	MANUFACTURED GAS PLANT
Potential COC:	30019
Confirmed COC:	30019
Potential Description:	SOIL
Alias Name:	RIVERSIDE MPG SITE
Alias Type:	Alternate Name
Alias Name:	SO CAL GAS - RIVERSIDE
Alias Type:	Alternate Name
Alias Name:	SOUTHERN CALIFORNIA GAS
Alias Type:	Alternate Name
Alias Name:	SOUTHERN CALIFORNIA GAS COMPANY
Alias Type:	Alternate Name
Alias Name:	TOWN GAS SITE - RIVERSIDE
Alias Type:	Alternate Name
Alias Name:	211-201-004
Alias Type:	APN
Alias Name:	211-201-039
Alias Type:	APN
Alias Name:	110033615746
Alias Type:	EPA (FRS #)
Alias Name:	400964
Alias Type:	Project Code (Site Code)
Alias Name:	33490085
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedy Constructed: Operating Properly & Successfully
Completed Date:	03/06/2012
Comments:	Construction Complete
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	04/20/2012
Comments:	Post Closure Soil Gas and Groundwater Sampling completed
Completed Area Name:	PROJECT WIDE

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 08/30/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 12/09/2005
Comments: DTSC conditionally approved the SSI/HRA report and recommended to proceed with the submittal of the RAW.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Plan
Completed Date: 10/15/2007
Comments: DTSC approved the RAP and the Negative Declaration for the site. The site's soil is contaminated with elevated levels of polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), benzidine, lead and arsenic. The selected remedial alternative is the excavation of all contaminated soil above site target criteria. The excavated soil will be removed and transported off-site for treatment/recycling or disposal. It is expected that approximately 100,000 tons on contaminated soil will be removed from the site. The excavated area will be restored by backfilling with clean imported soil, followed by compacting and grading.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/02/1994
Comments: PEA considered complete. Further investigation/remediation warranted in future on lo-priority basis.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/04/2006
Comments: DTSC completed review and suggested incorporation of acceptable response into subsequent quarterly reports.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/31/2005
Comments: Approved and asked to incoporate comments in the 2nd quarter report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/18/2006
Comments: Approved and recommended to incorporate comments in the 3rd quarter monitoring report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Document Type: Monitoring Report
Completed Date: 05/25/2006
Comments: DTSC does not have any comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Report
Completed Date: 06/25/2007
Comments: DTSC approved the FS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/22/2006
Comments: DTSC approved the report with comments. However, recommened to incorporate DTSC's comments in the future reports.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/11/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/11/2007
Comments: DTSC provided comments regrding the subject document.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 06/30/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 06/30/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Plan
Completed Date: 06/20/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 08/17/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/18/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/09/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 09/24/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 08/06/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 03/06/2012
Comments: Riverside MGP RACR final reviewed and approved

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/06/2009
Comments: DTSC approved the report. However, recommended not to discontinue Title 2 metal analysis. DTSC suggested to reduce the frequency of metal analysis from quarterly to annual basis.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 12/06/2008
Comments: DTSC scheduled a meeting to discuss internally.

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application
Completed Date: 01/05/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 01/26/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/30/2010
Comments: RA Fieldwork Implemented

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 11/05/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/23/2011
Comments: Supplemental fieldwork completed in support of Remedial Action

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 07/18/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Neg. Declaration
Completed Date: 10/15/2007
Comments: DTSC approved the Negative Declaration.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/09/2007
Comments: DTSC sent the cost estimate for the upcoming year.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/07/2009
Comments: Mailed the letter to the RP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Date: 11/09/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 08/15/2008
Comments: DTSC sent a letter requesting voluntary site access for implementing the RAP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Voluntary Cleanup Agreement Completion
Completed Date: 08/20/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 10/19/2010
Comments: Draft and send out cost estimate letter for fiscal year 2010-2011

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/22/2010
Comments: FMC Invite letter competed and sent out

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 06/01/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 11/29/2012
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: 5 Year Review Reports
Schedule Due Date: 04/15/2013
Schedule Revised Date: Not reported

ENVIROSTOR:
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 1.2
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Program Manager:	Tedd Yargeau
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Facility ID:	33490085
Site Code:	400964
Assembly:	61
Senate:	31
Special Program:	Voluntary Cleanup Program
Status:	Active
Status Date:	10/22/1997
Restricted Use:	YES
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	33.975
Longitude:	-117.368
APN:	211-201-004, 211-201-039
Past Use:	MANUFACTURED GAS PLANT
Potential COC:	30019
Confirmed COC:	30019
Potential Description:	SOIL
Alias Name:	RIVERSIDE MPG SITE
Alias Type:	Alternate Name
Alias Name:	SO CAL GAS - RIVERSIDE
Alias Type:	Alternate Name
Alias Name:	SOUTHERN CALIFORNIA GAS
Alias Type:	Alternate Name
Alias Name:	SOUTHERN CALIFORNIA GAS COMPANY
Alias Type:	Alternate Name
Alias Name:	TOWN GAS SITE - RIVERSIDE
Alias Type:	Alternate Name
Alias Name:	211-201-004
Alias Type:	APN
Alias Name:	211-201-039
Alias Type:	APN
Alias Name:	110033615746
Alias Type:	EPA (FRS #)
Alias Name:	400964
Alias Type:	Project Code (Site Code)
Alias Name:	33490085
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedy Constructed: Operating Properly & Successfully
Completed Date:	03/06/2012
Comments:	Construction Complete
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	04/20/2012
Comments:	Post Closure Soil Gas and Groundwater Sampling completed
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	08/30/2012

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 12/09/2005
Comments: DTSC conditionally approved the SSI/HRA report and recommended to proceed with the submittal of the RAW.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Plan
Completed Date: 10/15/2007
Comments: DTSC approved the RAP and the Negative Declaration for the site. The site's soil is contaminated with elevated levels of polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), benzidine, lead and arsenic. The selected remedial alternative is the excavation of all contaminated soil above site target criteria. The excavated soil will be removed and transported off-site for treatment/recycling or disposal. It is expected that approximately 100,000 tons on contaminated soil will be removed from the site. The excavated area will be restored by backfilling with clean imported soil, followed by compacting and grading.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/02/1994
Comments: PEA considered complete. Further investigation/remediation warranted in future on lo-priority basis.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/04/2006
Comments: DTSC completed review and suggested incorporation of acceptable response into subsequent quarterly reports.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/31/2005
Comments: Approved and asked to incoporate comments in the 2nd quarter report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/18/2006
Comments: Approved and recommended to incorporate comments in the 3rd quarter monitoring report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 05/25/2006
Comments: DTSC does not have any comments.

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Report
Completed Date: 06/25/2007
Comments: DTSC approved the FS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 11/22/2006
Comments: DTSC approved the report with comments. However, recommened to incorporate DTSC's comments in the future reports.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/11/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/11/2007
Comments: DTSC provided comments regrding the subject document.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 06/30/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 06/30/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Plan
Completed Date: 06/20/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 08/17/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Document Type: Monitoring Report
Completed Date: 10/18/2007
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 04/22/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/09/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 09/24/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 08/06/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 03/06/2012
Comments: Riverside MGP RACR final reviewed and approved

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 01/06/2009
Comments: DTSC approved the report. However, recommended not to discontinue Title 2 metal analysis. DTSC suggested to reduce the frequency of metal analysis from quarterly to annual basis.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 12/06/2008
Comments: DTSC scheduled a meeting to discuss internally.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Date: 01/05/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 01/26/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 06/30/2010
Comments: RA Fieldwork Implemented

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 11/05/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/23/2011
Comments: Supplemental fieldwork completed in support of Remedial Action

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 07/18/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Neg. Declaration
Completed Date: 10/15/2007
Comments: DTSC approved the Negative Declaration.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/09/2007
Comments: DTSC sent the cost estimate for the upcoming year.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/07/2009
Comments: Mailed the letter to the RP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/09/2007
Comments: Not reported

SO CAL GAS/RIVERSIDE MGP (Continued) **S101481581**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 08/15/2008
Comments: DTSC sent a letter requesting voluntary site access for implementing the RAP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Voluntary Cleanup Agreement Completion
Completed Date: 08/20/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 10/19/2010
Comments: Draft and send out cost estimate letter for fiscal year 2010-2011

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/22/2010
Comments: FMC Invite letter competed and sent out

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 06/01/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 11/29/2012
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: 5 Year Review Reports
Schedule Due Date: 04/15/2013
Schedule Revised Date: Not reported

Count: 19 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BLYTHE	U001576259	BLYTHE AIRPORT	HIGHWAY 60	92501	HIST UST
BOX SPRINGS	1000213838	GENERAL TELEPHONE OF CA	OFF HWY	92507	RCRA-SQG, FINDS
CORONA	S103891597	CHEVRON #9-9398	610 MAIN ST	92509	HIST CORTESE, LUST
FAIRFIELD	S100179261	NORTH WEST PIPE	4898 PEABODY	92504	HIST CORTESE, Notify 65
GLEN AVON	1006805292	SHELL SERVICE STATION	10171 MISSION / HWY 60	92509	RCRA-SQG, FINDS
RIVERSIDE	S106117723	SMITH PROPERTY	7TH ST & BROCKTON AVE		LUST
RIVERSIDE	S110654910	SMITH PROPERTY	7TH ST & BROCKTON AVE	92507	LUST
RIVERSIDE	1010698687	NE ALMOND ST AND 14TH ST	NE ALMOND ST AND 14TH ST	92506	US BROWNFIELDS, FINDS
RIVERSIDE	S105025848	UNOCAL #	6571 BROCKTON AVE	92506	HIST CORTESE
RIVERSIDE	S105025887	CAMP YOUNG	25 MI E. OF INDIO HWY 195	92501	HIST CORTESE
RIVERSIDE	S112831928	CITY OF RIVERSIDE GRANITE PIT MINE	FREEMONT ST & MOUNT VIEW AVE		SWF/LF
RIVERSIDE	1003878498	PACIFIC AIRMOTIVE	RIVERSIDE MUNICIPAL ARPT	92504	CERC-NFRAP
RIVERSIDE	1010698692	N OF 14TH ST, ON S SIDE OF BLOCK	N ST OF 14TH ON SIDE OF BLOCK	92501	US BROWNFIELDS, FINDS
RIVERSIDE	S103820756	RVSD CITY LANDFILL	5253 TEQUESQUITE AVE		LUST
RIVERSIDE	S109287719	LANDFILL,TEQUESQUITE-CLOSED	6253 TEQUESQUITE AVE		SWF/LF, LDS, Financial Assurance
RIVERSIDE	S109444534	GLEN AVON TRANSPORTATION YARD	4725 TROY CT	92509	SWF/LF, NPDES
RIVERSIDE	S104970783	UCR - PARKING LOT 6	UNIVERSITY OF CALIF RIVERSIDE		LUST
RIVERSIDE	S110654911	U C RIVERSIDE PARKING LOT #6	UNIVERSITY OF CA RIVERSIDE	92507	LUST
RIVERSIDE COUNTY	M300003146	FST SAND & GRAVEL, INC.	FST OGLEBAY NORTON		US MINES

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 12

Source: EPA
Telephone: N/A
Last EDR Contact: 05/09/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 12

Source: EPA
Telephone: N/A
Last EDR Contact: 05/09/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/01/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: N/A
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 05/09/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/04/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: 703-412-9810
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 05/29/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 09/09/2013
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/31/2012	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/09/2012	Telephone: 703-603-8704
Date Made Active in Reports: 12/20/2012	Last EDR Contact: 04/10/2013
Number of Days to Update: 72	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/05/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: 703-412-9810
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 05/29/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 05/09/2013
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 6

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 29

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 04/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/18/2013
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 30

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/21/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/01/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 162

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/01/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Semi-Annually

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 04/18/2013
Number of Days to Update: 30

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-5092
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/21/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 45

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/02/2012
Date Data Arrived at EDR: 08/03/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 94

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/07/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 156

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/18/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 14

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/05/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/10/2012
Date Data Arrived at EDR: 12/11/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/26/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: No Update Planned

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/19/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 04/26/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 20

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 05/03/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/12/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 59

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 04/25/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/11/2013
Date Data Arrived at EDR: 03/12/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/12/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/06/2012
Date Data Arrived at EDR: 01/29/2013
Date Made Active in Reports: 03/19/2013
Number of Days to Update: 49

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 05/01/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/07/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 15

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 01/15/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 57

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/13/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 04/18/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 22

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/04/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 09/01/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 131

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/29/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/28/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Every 4 Years

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2012
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 114

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 60

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/09/2013
Date Data Arrived at EDR: 04/11/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 29

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/11/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/23/2011
Date Data Arrived at EDR: 12/13/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 79

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/12/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/08/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/10/2012
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/30/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/18/2013
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/21/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Quarterly

UIC: UIC Listing

A listing of underground control injection wells.

Date of Government Version: 03/05/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/19/2013
Next Scheduled EDR Contact: 12/31/2012
Data Release Frequency: Varies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/2013
Date Data Arrived at EDR: 04/02/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 42

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 04/02/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 12/12/2012
Date Made Active in Reports: 01/04/2013
Number of Days to Update: 23

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 12/24/2012
Data Release Frequency: Annually

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 04/29/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 17

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 06/22/2012
Date Made Active in Reports: 07/06/2012
Number of Days to Update: 14

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/29/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/03/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/19/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 03/06/2013
Date Data Arrived at EDR: 03/12/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 13

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 04/18/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/15/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 31

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/16/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/25/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 27

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/29/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/19/2013
Date Data Arrived at EDR: 02/20/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 28

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 05/03/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List
The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/17/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: N/A

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 12/02/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/04/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Quarterly

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Annually

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 30

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Semi-Annually

Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 30

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List
Cupa Facility List

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 04/04/2013
Number of Days to Update: 21

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 10/16/2012
Date Data Arrived at EDR: 10/17/2012
Date Made Active in Reports: 11/13/2012
Number of Days to Update: 27

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 04/29/2013
Data Release Frequency: Varies

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 04/16/2013
Date Data Arrived at EDR: 04/17/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 29

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 01/04/2013
Date Data Arrived at EDR: 01/14/2013
Date Made Active in Reports: 03/01/2013
Number of Days to Update: 46

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/09/2013
Date Data Arrived at EDR: 04/10/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 34

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/09/2013
Date Data Arrived at EDR: 01/10/2013
Date Made Active in Reports: 02/25/2013
Number of Days to Update: 46

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/27/2013
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 25

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 03/31/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 30

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 05/01/2012
Date Data Arrived at EDR: 05/02/2012
Date Made Active in Reports: 06/11/2012
Number of Days to Update: 40

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/26/2012
Date Data Arrived at EDR: 06/27/2012
Date Made Active in Reports: 08/17/2012
Number of Days to Update: 51

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/13/2013
Date Made Active in Reports: 03/21/2013
Number of Days to Update: 36

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/25/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 12/28/2012
Date Made Active in Reports: 01/25/2013
Number of Days to Update: 28

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/24/2013
Date Data Arrived at EDR: 04/24/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 23

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/24/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/30/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 32

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 04/29/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 18

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 31

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 31

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 11/26/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 01/21/2013
Number of Days to Update: 54

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/25/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 27

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/08/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 17

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/08/2013
Date Data Arrived at EDR: 03/08/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 17

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 05/17/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 22

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/19/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 29

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 37

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/12/2013
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 14

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/23/2013
Date Data Arrived at EDR: 04/24/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 23

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 04/23/2013
Date Data Arrived at EDR: 04/24/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 22

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 04/11/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 33

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 04/12/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 34

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/05/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 20

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 05/13/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 08/17/2012
Date Data Arrived at EDR: 08/20/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 44

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 04/29/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 08/12/2013
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 03/12/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/10/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/25/2013
Date Data Arrived at EDR: 03/25/2013
Date Made Active in Reports: 04/18/2013
Number of Days to Update: 24

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 02/26/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 27

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 04/09/2013
Date Data Arrived at EDR: 04/10/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 34

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/05/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/06/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 19

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 34

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/13/2013
Next Scheduled EDR Contact: 08/26/2013
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 02/26/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 22

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 03/20/2013
Date Data Arrived at EDR: 03/28/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 47

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/20/2013
Date Data Arrived at EDR: 03/28/2013
Date Made Active in Reports: 05/13/2013
Number of Days to Update: 46

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 04/01/2013
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 41

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/02/2013
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 41

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 04/01/2013
Next Scheduled EDR Contact: 07/15/2013
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 13

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 03/11/2013
Next Scheduled EDR Contact: 06/24/2013
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/14/2013
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 42

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 05/15/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/30/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/06/2012
Number of Days to Update: 42

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/08/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/18/2013
Next Scheduled EDR Contact: 06/03/2013
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 01/28/2013
Date Data Arrived at EDR: 02/01/2013
Date Made Active in Reports: 03/20/2013
Number of Days to Update: 47

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/29/2013
Next Scheduled EDR Contact: 05/13/2013
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/28/2013
Date Made Active in Reports: 05/13/2013
Number of Days to Update: 46

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/25/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 05/13/2013
Number of Days to Update: 45

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/25/2013
Next Scheduled EDR Contact: 07/08/2013
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 03/05/2013
Date Data Arrived at EDR: 03/06/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 19

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/18/2013
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 03/21/2013
Number of Days to Update: 31

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/21/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/19/2013
Next Scheduled EDR Contact: 07/29/2013
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 02/07/2013
Date Made Active in Reports: 03/15/2013
Number of Days to Update: 36

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/09/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/23/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 57

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/23/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 06/22/2012
Date Made Active in Reports: 07/31/2012
Number of Days to Update: 39

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 09/27/2012
Number of Days to Update: 70

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/18/2013
Next Scheduled EDR Contact: 07/01/2013
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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APPENDIX F

Riverside Public Utilities Letter

City of Arts & Innovation

June 10, 2013

Steve Hayes
City Planner
City of Riverside - Planning Department
3900 Main Street, 3rd Floor
Riverside, CA 92522

Subject: Specific Plan for the Riverside Community Hospital

Dear Mr. Hayes,

This letter is in response to the Riverside Community Hospital's projected water demand increase associated with the planned expansion presented to the Riverside Public Utilities (RPU) at a meeting on February 19, 2013 and through subsequent correspondences related to their proposed Specific Plan.

The proposed project will increase the Riverside Community Hospital bed capacity from the existing 372 bed campus to a 600 bed campus on approximately 17.5 acres within the City of Riverside. This project will have two phases, with construction estimated to span over a 30 year period. Figure 1 attached here to, shows the site plan for the existing Riverside Community Hospital complex.

Phase I of the Specific Plan will focus on a new seven story (plus penthouse) hospital bed tower addition that will house up to 189 new beds. This would bring the total bed count to approximately 565. The tower would accommodate relocation of acute care services housed in Building A. Figure 2 attached here to, shows the site plan for the proposed Phase I improvements. Construction of the new bed tower would eliminate some on-campus parking and an existing Medical Office Building (Building N). The Specific Plan will also include all other existing buildings on site, and should allow for future growth.

Phase II of the Specific Plan is anticipated to include several new structures that would be constructed on the existing 17.5 acre hospital campus over a 30 year period. It is estimated that the maximum bed capacity will be approximately 600. Phase II focuses on relocating beds out of Building B and D and the demolition of Building A. Phase II is expected to include: construction of Hospital, Clinical or Medical Office Building, or parking in the northeast corner of the site; construction of surface parking as needed to support growth; and construct Phase II Hospital Bed Tower to accommodate patient beds and acute care services. Figure 3 attached here to, shows the site plan for the proposed Phase II improvements.

Riverside Public Utilities • Administration
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WATER | ENERGY | LIFE
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An estimate of the new water demand was made using typical industry duty factors as well as those factors developed as part of the City's Water System Master Plan, updated in 2010. The water demand estimate is presented in Table 1. As indicated in this table, the estimated new total demands for the Riverside Community Hospital is projected to be about 332 acre-feet per year (AFY), a net increase of about 132 AFY.

Table 1 Water Demand Summary

Building / Land Use	Size	Units	Water Demand Criteria (gpd)	Average Flow (gpd)	Water Demand (acre-feet/year)
Main Hospital (Building A)	58,705	sq ft	0.25 per sq ft	14,676	
Main Hospital (Building B)	273	beds	300 per bed	81,900	
Main Hospital (Building C)	34	beds	300 per bed	10,200	
Main Hospital (Building D)	66	beds	300 per bed	19,800	
Hospital Infill (Building E)		assumed insignificant		0	
Central Plant (Building F)		assumed insignificant		0	
Emer. Dept. Parking Structure (G)		parking only - no water usage		0	
Health Education Center (H)	12,000	sq ft	0.25 per sq ft	3,000	
Parking Structure (I)		parking only - no water usage		0	
Parking Structure Expansion (J)		parking only - no water usage		0	
4500 Brockton MOB (K)	65,503	sq ft	0.25 per sq ft	16,376	
Brockton Storage Building (L)		storage only - no water usage		0	
Women's Services Building (M)		assumed insignificant		0	
4000 14th Street MOB (N)	61,135	sq ft	0.25 per sq ft	15,284	
4550 Brockton Parking Structure (O)		parking only - no water usage		0	
March 2008 - February 2012 Projected				*161,236*	
March 2008 - February 2013 Actual				163,367	
4510 Brockton MOB (P)	60,897	sq ft	0.25 per sq ft	15,224	
Existing Total				**178,591**	**200.02**
4000 14th Street MOB (N)	-61,135	sq ft	0.25 per sq ft	-15,284	
Phase 1 Bed Tower	189	beds	300 per bed	56,700	
Phase 1 Total				**220,008**	**246.41**
Main Hospital (Building A)	-58,705	sq ft	0.25 per bed	-14,676	
Main Hospital (Building D)	-66	beds	300 per bed	-19,800	
Main Hospital (Building D)	41,431	sq ft	0.25 per sq ft	10,358	
Phase 2 MOB	100,000	sq ft	0.25 per sq ft	25,000	
Main Hospital (Building B)	-273	beds	300 per bed	-81,900	
Main Hospital (Building B)	176,040	sq ft	0.25 per sq ft	44,010	
Phase 2 Bed Towers	377	beds	300 per bed	113,100	
Phase 2 Total				**296,099**	**331.63**

RPU provides municipal water service to customers within its service area which includes the proposed project site. RPU has over 5,000 water supply connections; therefore, SB 610 (Water Code section 10912 (a)) requires RPU to prepare a water supply assessment when a project includes any of the following components: (1) more than 500 residential dwelling units, (2) a shopping center or business with more than 500,000 square feet of floor space or more than 1,000 employees, (3) a commercial office building with more than 250,000 square feet of floor space or more than 1,000 employees, (4) a hotel or motel with more than 500 rooms, (5) an industrial, manufacturing or processing plant, or an industrial park, with more than 650,000 square feet of floor area, more than 1,000 employees, or that occupies more than 40 acres, (6) a mixed-use project that includes one or more of the projects specified in the subdivision, or (7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

In determining whether a project would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project, it is generally acknowledged that one acre-foot of water can serve about two households on an annual basis; therefore, one dwelling unit typically consumes about 0.5 acre-ft of water a year, depending on several factors, including the regional climate. Historically, within RPU's Service Area one dwelling unit typically consumes between 0.6 to 0.8 acre-ft of water a year; due to the arid climate of the region. Therefore, a 500 dwelling unit project in RPU's Service Area would typically require between 300 to 400 AFY.

RPU's analysis has determined that the net increase in water demand from the proposed project does not meet nor exceed any of the requirements listed in Water Code section 10912 (a); thus, a water supply assessment is not required for the proposed project.

On July 12, 2011, RPU's 2010 Urban Water Management Plan (UWMP) was adopted by City Council. The water demand and supply assessment within the UWMP shows that RPU's available water supplies are greater than its projected water demands. Specifically, RPU is projected to have at least 27,600 acre-ft of surplus water available beyond its projected water demands through 2035 in a normal water year. RPU is projected to have at least 17,200 acre-ft and 13,900 acre-ft of surplus water available beyond its projected water demands through 2035 in a single-dry year and multiple-dry year, respectively.

Therefore, pursuant to the information contained in RPU's 2010 UWMP, it appears that there is a sufficient surplus water supply available to RPU to meet Riverside Community Hospital's incremental increase in water demand of 132 acre-ft.

If you have any questions, please contact Arshad Syed, Water Resources Manager at (951) 826-5824.

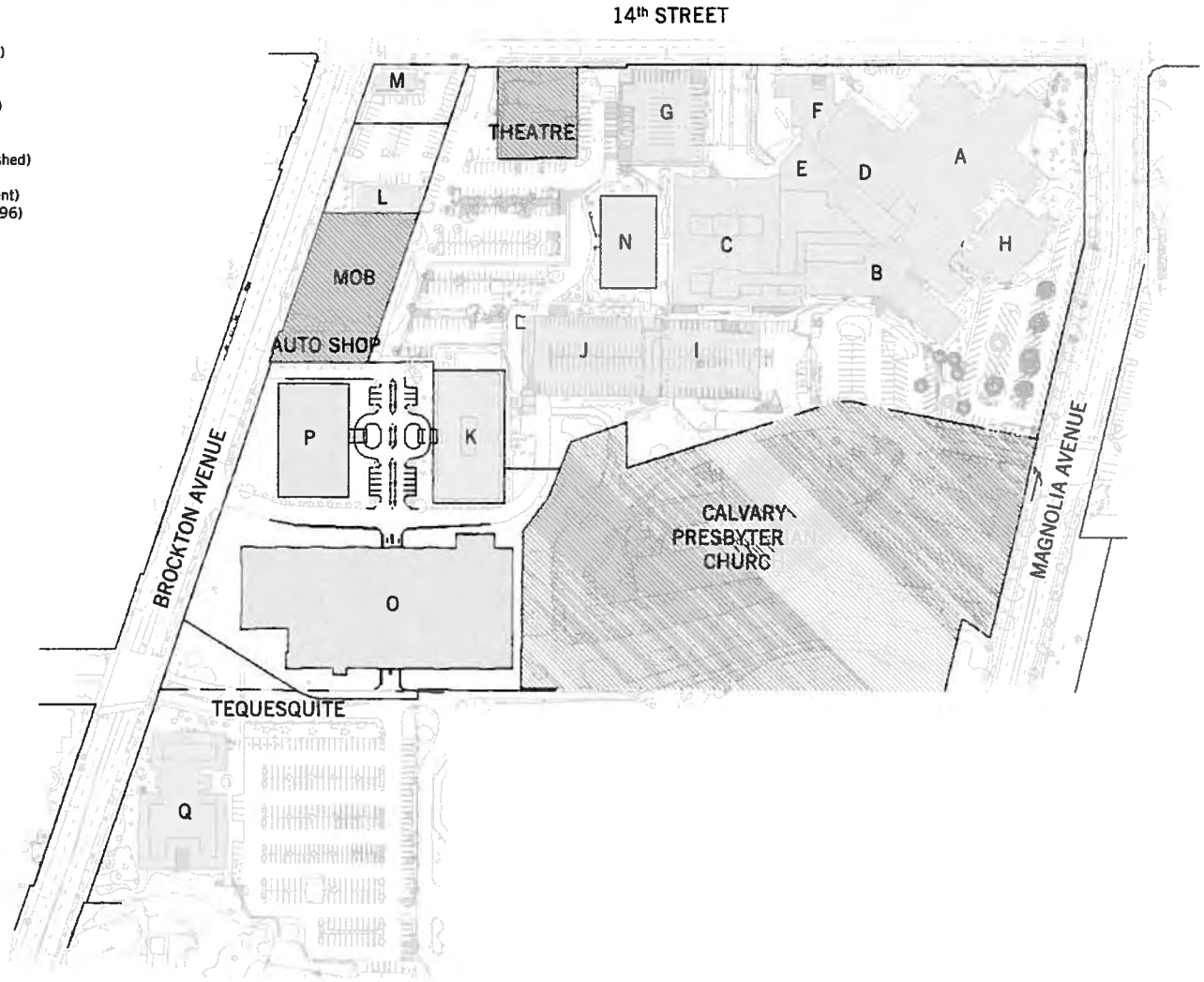
Sincerely,

Todd Jorgenson
Interim Utilities Assistant General Manager – Water
Riverside Public Utilities

BUILDING IDENTIFICATION:

A. Building A (1925)
B. Building B (1965)
C. Building C (1987)
D. Building D (1958)
E. Building E (TBD)
F. Building F (1997)
G. Parking Structure (2002)
H. Health Education Center (HEC) (1979)
I. Parking Structure (1983)
J. Parking Structure #1 (1983)
K Medical Office Building (MOB) (1986)
L. Brockton Storage Building (1958)
M. Women's Services Building (1981)
N. Medical Office Building (to be demolished)
O. Parking Structure (In development)
P. Medical Office Building (In development)
Q. Raincross Medical Office Building (1996)

PERKINS + WILL

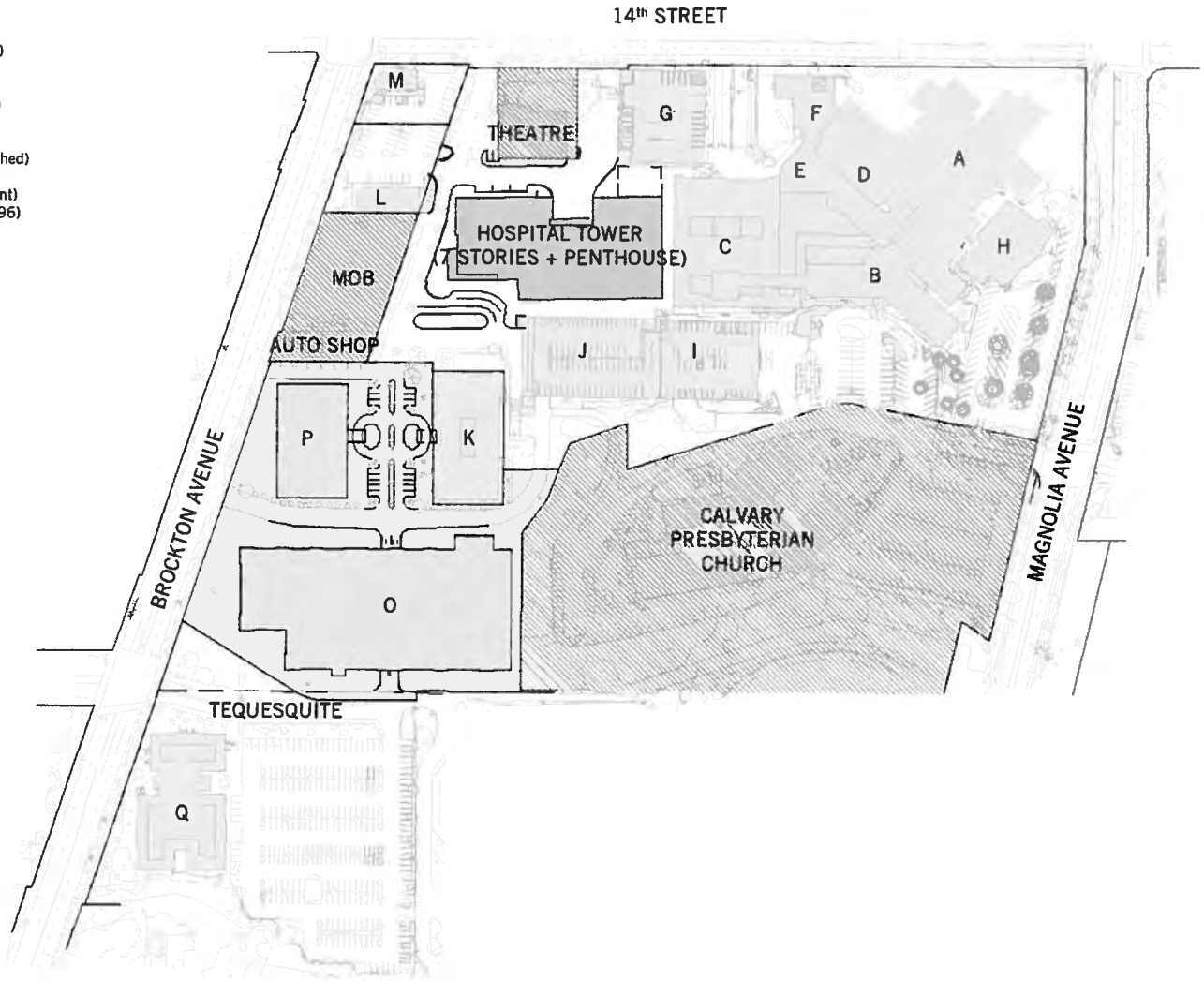


NORTH

EXISTING SITE PLAN

BUILDING IDENTIFICATION:
A. Building A (1925)
B. Building B (1965)
C. Building C (1987)
D. Building D (1958)
E. Building E (TBD)
F. Building F (1997)
G. Parking Structure (2002)
H. Health Education Center (HEC) (1979)
I. Parking Structure (1983)
J. Parking Structure #1 (1983)
K Medical Office Building (MOB) (1986)
L. Brockton Storage Building (1958)
M. Women's Services Building (1981)
N. Medical Office Building (to be demolished)
O. Parking Structure (In development)
P. Medical Office Building (In development)
Q. Raincross Medical Office Building (1996)

PERKINS + WILL

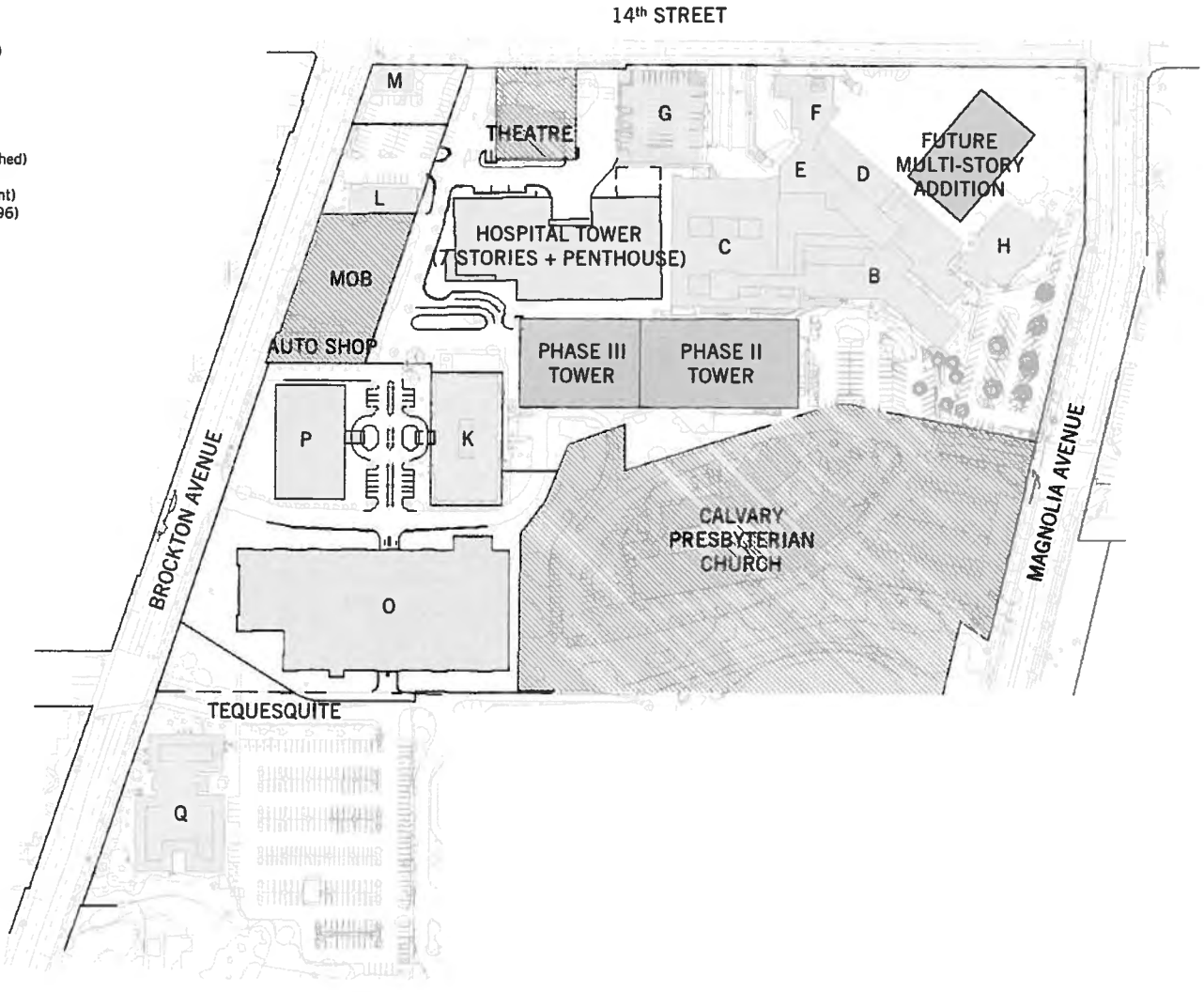


NORTH

PROPOSED SITE PLAN – PHASE I

BUILDING IDENTIFICATION:
A. Building A (1925)
B. Building B (1965)
C. Building C (1987)
D. Building D (1958)
E. Building E (TBD)
F. Building F (1997)
G. Parking Structure (2002)
H. Health Education Center (HEC) (1979)
I. Parking Structure (1983)
J. Parking Structure #1 (1983)
K Medical Office Building (MOB) (1986)
L. Brockton Storage Building (1958)
M. Women's Services Building (1981)
N. Medical Office Building (to be demolished)
O. Parking Structure (In development)
P. Medical Office Building (In development)
Q. Raincross Medical Office Building (1996)

PERKINS + WILL



NORTH

PROPOSED SITE PLAN – PHASE II

APPENDIX G

Noise Technical Memorandum

DUDEK

3685 MAIN STREET, SUITE 250
RIVERSIDE, CALIFORNIA 92501
T 951.300.2100 F 951.300.2105

October 25, 2013 7824-03

Patricia BrenesSenior Planner
City of Riverside Community Development Department
Planning Division
3900 Main Street, 3rd Floor
Riverside, California 92522

Subject: Riverside Community Hospital Specific Plan Expansion Project – Noise Technical Report

Dear Ms. Brenes:

This report contains our assessment of the noise environment at the proposed Riverside Community Hospital (RCH) Specific Plan Expansion Project (project) located in the City of Riverside, California.

Noise associated with construction and demolition activities, as well as noise from emergency vehicles (e.g., ambulance sirens), proposed parking structures and surface parking, and other on-site noise generators (emergency standby generator noise; heating, ventilation, and air conditioning (HVAC) noise, etc.) could significantly affect on-site hospital staff and patients, and noise-sensitive land uses including residences, day-care facilities, churches, and schools nearby.

The following analysis includes both construction and operational noise sources and evaluates them against the City of Riverside's (City's) Noise Standards for the surrounding sensitive receptors.

1.0 BACKGROUND

Project Setting

The approximately 22.5-acre project site is located at 4445 Magnolia Avenue in the City of Riverside, California. The site is bounded by 14th Street to the north, Brockton Avenue to the west, and Magnolia Avenue to the east. Evans Sports Complex, Tequesquite Avenue, and residential development are located to the south (Figure 1, Regional Map; Figure 2, Vicinity Map; Figure 3, Site Plan).

The project site is developed with an existing hospital campus owned and operated by an affiliate of Hospital Corporation of America. The uses adjacent to the project site are residences to the northwest; Riverside Community Players Theatre, Riverside County Community School, and a gas station to the north; muffler services to the northeast; Newman Park and Community Medical Group of Riverside to the east; Riverside City College to the southeast; Calvary Presbyterian Church, Evans Sports Complex, and residences to the south; and commercial and industrial uses to the west.

Previous Approvals/History of Project Changes

RCH currently operates under a Conditional Use Permit (CUP) that dates back to the 1960s and is consistent with the Downtown Specific Plan–Health Care District. Under the Downtown Specific Plan–Health Care District, hospitals are permitted with a CUP. Current RCH campus buildings, including years constructed, are listed in Table 1 and depicted on Figure 3, Site Plan.

Table 1
Existing Riverside Community Hospital Uses on Site

ID	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925
B	Building B	Hospital	176,040	273	1965
C	Building C	Hospital – ICU and med/surg	111,450	34	1987
D	Building D	Hospital	41,431	66	1958
E	Building E	Hospital	3,565	N/A	1954
F	Building F	Hospital	1,077	N/A	1996
G	Parking structure and helipad	Parking	59,500	N/A	2002
H	Health education center	Meeting rooms	12,543	N/A	1979
I	Parking structure	Parking	96,084	N/A	1982
J	Parking structure	Parking	101,049	N/A	1986
K	Medical office building 2	Cancer center	65,503	N/A	1986
L	Brockton storage building	Storage	4,450	N/A	1958
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981
N	Medical office building 1	Medical offices	61,135	N/A	1975
Q	Raincross medical office building	Medical offices	57,754	N/A	1996
		Total Square Footage	**852,186**		

Source: Kimley-Horn 2014; Byrum, pers. comm. 2013.
ID = identification letter used on Figure 3, Site Plan; N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical

Project Baseline

The RCH campus currently occupies approximately 852,186 square feet of development. Figure 3, Site Plan, depicts existing structures, existing structures to be demolished, and previously approved structures to be built. For purposes of analysis in the draft Environmental Impact Report (DEIR), any approved ongoing development currently under construction or commencing construction within approximately 12 months of the release of the Notice of Preparation is considered part of the existing development/approvals baseline.

A new, five-level, 385,500-square-foot, 1,060-parking-space structure (Building O), located on the northeast corner of Brockton Avenue and Tequesquite Avenue, is currently under construction and is anticipated to be completed by February 2014. Construction of a new, three-story, 61,000-square-foot medical office building (Building P), located on the northeast corner of Brockton Avenue and Tequesquite Avenue, is scheduled for completion in March 2014. These structures are to be constructed over the next 12 months and are therefore included in the baseline scenario. These structures are expected to be completed in early 2014, and since the approvals for these projects occurred prior to the start of the RCH Specific Plan (SP) and EIR process, these two structures are therefore included in the baseline scenario and are analyzed as part of the existing conditions. Table 2 includes the existing RCH buildings/structures as well as the new parking structure and new medical office building, which are all to be considered as part of the baseline conditions.

Table 2
Existing and Approved Riverside Community Hospital Uses on Site – Baseline Conditions

ID	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	No change
B	Building B	Hospital	176,040	273	1965	No change
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change
D	Building D	Hospital	41,431	66	1958	No change
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1996	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1982	No change
J	Parking structure	Parking	101,049	N/A	1986	No change

Table 2
Existing and Approved Riverside Community Hospital Uses on Site – Baseline Conditions

ID	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change
L	Brockton storage building	Storage	4,450	N/A	1958	No change
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change
N	Medical office building 1[a]	Medical offices	61,135	N/A	1975	No change
O	Parking structure[a]	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Under construction; anticipated construction completion February 2014
P	Medical office building	Medical offices	61,000	N/A	Construction anticipated to be completed 2014	Under construction; anticipated construction completion March 2014
Q	Raincross medical office building	Medical offices	57,754	N/A	1996	No change
Total Square Footage			**1,298,686**			

Source: Kimley-Horn 2014.
ID = identification on Figure 3, Site Plan; N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical
[a] Part of baseline conditions.

Project Description

RCH is proposing a new SP on the project site. A site master plan has been developed and includes both short-term and long-range planning goals that cover construction on the RCH campus over a 30-year period. The SP will be divided into Phases: Phase I and Phase II (which is further subdivided into subphases: Phase IIa, IIb, and IIc) (see Figure 3, Site Plan). The primary focus of Phase I of the project is to construct a new hospital bed tower to alleviate seismic concerns associated with existing buildings and to meet seismic retrofit requirements as required by Senate Bill (SB) 1953. Phases IIa, IIb, and IIc of the project also address seismic concerns and include future and possible long-range development. Phase I and Phase II of the project are described in this section.

Phase I – 2014 to 2017

Phase I of the SP will focus on a new, 251,500-square-foot, seven-story hospital bed tower addition that will house up to 105 new licensed beds with 35 intensive care patient rooms and 70 medical and surgical patient rooms to accommodate families, as well as expanding its service offerings to more critically ill patients, a laboratory, and food services operations. This would bring the total bed count on the hospital campus to approximately 478. The hospital bed tower would also accommodate the relocation of acute care services, such as dietary and laboratory services, that are currently housed in Building A, which is not compliant with SB 1953. The hospital currently employs approximately 1,960 employees. A total of 187 employees will relocate from Building A (119 laboratory employees and 68 dietary employees) to the new Phase I hospital tower and an additional 330 estimated employees would be needed to serve the new tower, resulting in a total of approximately 2,290 employees campus-wide during this phase. During Phase I, Building A would be used for hospital administrative support.

Construction of the new hospital bed tower for Phase I would eliminate 69 parking spaces (see Figure 3, Site Plan). The existing Building N, medical office building 1, would be proposed for demolition under Phase I to accommodate the new hospital bed tower. Building N would already be vacant prior to demolition as the physicians/staff would be relocated to the new Building P (which will be completed in March 2014 under the baseline/existing conditions). Also included in Phase I, Building B is proposed for a full seismic upgrade, including new windows as a result of the retrofit. Table 3 lists the existing RCH buildings/structures with the addition of the Phase I components of the project.

Table 3
Existing and Approved Riverside Community Hospital Uses on Site, including Phase I of the Project

ID	Building/ Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	Dietary/lab to move to the Phase I bed tower; Building A used for hospital administrative support
B	Building B	Hospital	176,040	273	1965	No change in footprint, but seismic upgrades needed
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change

Table 3
Existing and Approved Riverside Community Hospital Uses on Site, including Phase I of the Project

ID	Building/ Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action
D	Building D	Hospital	41,431	66	1958	No change in footprint, but seismic upgrades needed
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1996	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1982	No change
J	Parking structure	Parking	101,049	N/A	1986	No change
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change
L	Brockton storage building	Storage	4,450	N/A	1958	No change
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change
N	Medical office building 1	Medical offices	61,135	N/A	1975	To be demolished as part of Phase I of the project
O	Parking structure[a]	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
P	Medical office building[a]	Medical offices	61,000	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
Q	Raincross medical office building	Medical offices	57,754	N/A	1996	No change
Phase I	New Phase I hospital bed tower	Hospital	251,500	189		Phase I of the project
Total Square Footage[b]			**1,489,051**			

Source: Kimley-Horn 2014.
N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical
Note: Shaded rows represent changes from baseline conditions.
[a] Part of baseline conditions.
[b] Building N is not calculated in the total square footage as it is being demolished as part of Phase I of the project.

Phase II – 2017 to 2043

During Phase II of the project, it is anticipated that several new structures would be constructed on the existing 22.5-acre hospital campus over a 30-year period. Phase II would be broken down into subphases: Phase IIa, Phase IIb, and Phase IIc.

Phase IIa – 2017 to 2024

Phase IIa would occur between 2017 and 2024 and would consist of the demolition of Building A, since it is not in compliance with SB 1953 and can no longer house acute care services. An approximately 100,000-square-foot mixed-use building is proposed on the Building A site. Also the buildout of the shell space (84 additional licensed beds) in the Phase I tower would most likely occur during this phase (or earlier if necessary). Once the tower has been built, the maximum bed capacity on campus would be 562 licensed beds. Additional surface or structure parking is also anticipated to be needed in this phase to support the new space.

Phase IIb – 2024 to 2029

Phase IIb would occur between 2024 and 2029 and would consist of a second new, estimated nine-story, 600,000-plus-square-foot replacement bed tower, totaling 339 licensed beds (273 licensed beds relocated from Building B and 66 licensed beds relocated from Building D to the proposed replacement bed tower after the seismic upgrades are complete under Phase I). The relocation of 339 licensed beds would keep the number of licensed beds on campus at 562. Phase IIb focuses on relocating licensed beds and acute care services out of Building B and Building D to the new second tower, as those buildings are no longer in compliance with SB 1953. Once the licensed beds are relocated to the new second hospital bed tower, Building B and Building D will be used for outpatient, skilled nursing, support, and education (e.g., University of California, Riverside Program Space). Phase IIb includes the existing parking structures (identified as I and J on Figure 3, Site Plan) to be demolished prior to the construction of the Phase IIb replacement bed tower and future Phase IIc portion of the project. Some additional convenience parking could be included during this phase.

Phase IIc – 2030 to 2043

Phase IIc would occur between 2030 and 2043 and is expected to include the following:

- Addition of 38 licensed beds, to take the campus-wide total to 600 licensed beds (this could occur in Phase IIb if need is demonstrated prior to 2030)
- Construction of ancillary services as necessary
- Construction of surface or structured parking as needed to support growth.

Long-range development as part of Phase IIc of the project could include future acute care expansions, parking structures, or other ancillary uses, including but not limited to the following:

- Acute care services
- Central utility plants
- Medical office buildings and clinics
- Outpatient services buildings
- Education centers
- Dental clinics
- Imaging centers
- Pharmacies
- Wellness centers
- Physical therapy or rehabilitation centers
- Community centers
- Optometry services
- Medical retail (medical supplies)
- Off-site street parking, parking structures, or surface parking lots
- Hotel facilities.

Table 4 lists the existing RCH buildings/structures as well as Phase I, Phase IIa, and Phase IIb components of the project.

Table 4
Existing and Approved Riverside Community Hospital Uses on Site, Phase I, Phase IIa, and Phase IIb of the Project

ID	Building/ Structure	Use	Square Footage	Number of Beds	Year Constructed	Action
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	To be demolished as part of Phase IIa of the project
B	Building B	Hospital	176,040	273	1965	Part of Phase IIb of the project: 273 beds will be moved to the new Phase IIb replacement bed tower; Building B will be used for outpatient, skilled nursing, support, and education
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change

Table 4
Existing and Approved Riverside Community Hospital Uses on Site, Phase I, Phase IIa, and Phase IIb of the Project

ID	Building/ Structure	Use	Square Footage	Number of Beds	Year Constructed	Action
D	Building D	Hospital	41,431	66	1958	Part of Phase IIb of the project: 66 beds will be moved to the new Phase IIb replacement bed tower; Building D will be used for outpatient, skilled nursing, support, and education
E	Building E	Hospital	3,565	N/A	1954	No change
F	Building F	Hospital	1,077	N/A	1997	No change
G	Parking structure	Parking	59,500	N/A	2002	No change
H	Health education center	Meeting rooms	12,543	N/A	1979	No change
I	Parking structure	Parking	96,084	N/A	1983	To be demolished as part of Phase IIb of the project
J	Parking structure	Parking	101,049	N/A	1983	To be demolished as part of Phase IIb of the project
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change
L	Brockton storage building	Storage	4,450	N/A	1958	No change
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change
N	Medical office building 1	Medical offices	61,135	N/A	1975	To be demolished as part of Phase I of the project
O	Parking structure[a]	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
P	Medical office building[a]	Medical offices	60,897	N/A	Construction anticipated to be completed 2014	Part of baseline conditions
Q	Raincross medical office building	Medical offices	57,754	N/A	1996	No change
Phase I	New Phase I hospital bed tower	Hospital	251,500	189		Part of Phase I of the project

Table 4
Existing and Approved Riverside Community Hospital Uses on Site, Phase I, Phase IIa, and Phase IIb of the Project

ID	Building/ Structure	Use	Square Footage	Number of Beds	Year Constructed	Action
Phase IIb	New Phase II replacement bed tower	Hospital	600,000+	377[b]		Part of Phase IIb of the project
Phase IIa	Mixed-use building in location of Building A	Medical offices	100,000	N/A		Phase IIa of the project
Total Square Footage[c]			**1,994,245**			

Source: Kimley-Horn 2014.
N/A = not applicable; ICU = intensive care unit; med/surg = medical/surgical
Notes: Phase IIc is not included in the table since specific project development details under Phase IIc is not known at this time.
Shaded rows represent changes from baseline conditions and Phase II of the project.
[a] Part of baseline conditions.
[b] Phase IIb hospital bed tower licensed beds includes the licensed beds that would be relocated from Building B (273 licensed beds) and Building D (66 licensed beds) and future addition of 38 licensed bed to the Phase IIb hospital bed tower (273+66+38=377 licensed beds).
[c] Buildings A, I, J, and N are not calculated in the total square footage as they are proposed for demolition as part of Phase I or Phase II of the project.

2.0 FUNDAMENTALS OF NOISE

Noise Terminology

Sound may be described in terms of level or amplitude (measured in decibels (dB)), frequency or pitch (measured in hertz (Hz) or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the amplitude of sound is the decibel. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech interference, sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and local agencies have established criteria to protect public health and safety, to prevent disruption of certain human activities, and to minimize annoyance.

Several descriptors of noise (noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise, on a community. These descriptors include the equivalent noise level over a given period (L_{eq}), the day–night average noise level (L_{dn}), and the community noise equivalent level (CNEL). Each of these descriptors uses units of dBA.

L_{eq} is a sound energy level averaged over a specified time period (usually 1 hour). L_{eq} is a single numerical value that represents the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour L_{eq} measurement would represent the average amount of energy contained in all the noise that occurred in that 1 hour. L_{eq} is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors. L_{max} is the greatest sound level measured during a designated time interval or event.

Unlike the L_{eq} metric, L_{dn} and CNEL metrics always represent 24-hour periods, usually on an annualized basis. L_{dn} and CNEL also differ from L_{eq} because they apply a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). "Time weighted" refers to the fact that L_{dn} and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m.–7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m.–10:00 p.m.) is penalized by adding 5 dB, while nighttime (10:00 p.m.–7:00 a.m.) noise is penalized by adding 10 dB. L_{dn} differs from CNEL in that the daytime period is defined as 7:00 a.m.–10:00 p.m., thus eliminating the evening period. L_{dn} and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 to 1 dB. L_{eq} is generally used to measure noise affecting sensitive receptors where noise is not a concern during the evening and nighttime periods (e.g., schools, office buildings) or where the noise is only generated during daytime hours (e.g., construction).

Examples of typical noise levels for common indoor and outdoor activities are depicted in Table 5.

Table 5
Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
—	110	Rock band
Jet flyover at 300 meters (1,000 feet)	100	—
Gas lawnmower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kilometers/hour (50 miles per hour)	80	Food blender at 1 meter (3 feet) Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime Gas lawnmower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)
Commercial area Heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)
Quiet urban daytime	50	Large business office Dishwasher next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night, concert hall (background)

Table 5
Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 1998.

3.0 NOISE CRITERIA

The noise environment within the City of Riverside is addressed within the City's General Plan Noise Element and the City's Municipal Code Noise Code (City of Riverside 2007a, 2007b). The City's General Plan Noise Element addresses land use compatibility. The City's Noise Element states that a CNEL greater than 75 dBA is normally unacceptable for commercial uses, CNEL greater than 70 dBA is normally unacceptable for hospital operations, and CNEL greater than 65 dBA is normally unacceptable for single family residential uses.

Noise-generating sources in Riverside are regulated by the City's Municipal Code Noise Code (City of Riverside 2007b). The sound limits apply to noise generation from one property to an adjacent property. The sound level limits depend on the time of day, the duration of the noise, and land use. The sound level limits are depicted in Table 6. The sound level limits shall not be exceeded on or beyond the boundaries of the property on which the noise is produced. The sound level limit between two different districts is the arithmetic mean of the two districts. For example, the sound level limit between an office/commercial use and residential use is 55 dBA between the hours of 10:00 p.m. and 7:00 a.m., and 60 dBA between the hours of 7:00 a.m. and 10:00 p.m.

The City has established hourly restrictions and noise level limits for construction and demolition activities (City of Riverside 2007b). Construction and demolition activities are not permitted between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, and between 5:00 p.m. and 8:00 a.m. on Saturdays, or at any time on Sundays or federal holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial property line or at any time exceeds the maximum permitted noise level for the underlying land use category, except for emergency work or by variance (City of Riverside 2007b).

Table 6
Exterior Noise Limits

Land Use Category	Noise Level (dBA)	
	Nighttime 10:00 p.m.–7:00 a.m.	Daytime 7:00 a.m.–10:00 p.m.
Residential	45	55
Office/commercial	65	65

Table 6
Exterior Noise Limits

Land Use Category	Noise Level (dBA)	
	Nighttime 10:00 p.m.–7:00 a.m.	Daytime 7:00 a.m.–10:00 p.m.
Industrial/non-urban	70	70
Community support	60	60
Public recreation facility	65	65

Source: City of Riverside 2007b.

4.0 METHODOLOGY

Ambient noise measurements were conducted to quantify the existing daytime noise environment at seven sites. Noise levels resulting from the proposed construction activities have been obtained from reports prepared by the Federal Transit Administration (FTA 2006) and field data from files. The noise impact assessment used criteria established in the City of Riverside General Plan and Municipal Code (City of Riverside 2007a, 2007b).

The noise level associated with selected roadways was determined based on ambient noise measurements and using the Federal Highway Administration TNM 2.5 Traffic Noise Model (FHWA 2004).

5.0 EXISTING CONDITIONS

The site is primarily subject to traffic noise impacts associated with 14th Street, Brockton Avenue, and Market Street/Magnolia Avenue. Table 7 provides average daily traffic (ADT) along the roadway segments primarily subject to traffic noise impacts and that have noise-sensitive land uses.

Table 7
Existing Average Daily Traffic (ADT)

Roadway Segment	Roadway Classification[a]	ADT[b]
14th St.: West of Brockton Ave.	Two-lane collector	3,099
14th St.: Brockton Ave. to Magnolia Ave.	Four-lane arterial (100 feet)	11,491
14th St.: Magnolia Ave. to Mulberry Ave.	Four-lane arterial (100 feet)	28,557
Brockton Ave.: 14th St. to Tequesquite Ave.	Four-lane arterial (88 feet)	17,643
Brockton Ave.: Tequesquite Ave. to Ramona Dr.	Four-lane arterial (88 feet)	14,332
Magnolia Ave.: 14th St. to 15th St.	Four-lane arterial (100 feet)	27,031
Magnolia Ave.: 15th St. to Ramona Dr.	Four-lane arterial (100 feet)	21,142

Source: Kimley-Horn 2014.
[a] Existing road/street classification is based on the City of Riverside (2007c).
[b] ADT volumes for the roadway segments were provided by National Data & Surveying Services and measured in vehicles per day.

Ambient Noise Measurements

Noise measurements were conducted adjacent to and near the project site in June 2013 and July 2013 to determine the existing noise levels. Table 8 provides the location, date, and time the noise measurements were taken.

The noise measurements were made using a Piccolo Sound Level Meter (Serial Number 121018007) integrating sound level meter equipped with a 0.5-inch pre-polarized condenser microphone with pre-amplifier. The sound level meter meets the current American National Standards Institute (ANSI) standard for a Type 2 precision sound level meter. The sound level meter was calibrated before and after the measurements, and the measurements were conducted with the microphone positioned approximately 5 feet above the ground.

Seven noise measurement locations that represented key potential sensitive receptors or sensitive land uses were selected adjacent to or near the project site. These locations are depicted as Receptors 1–7 (R1–R7) on Figure 4. R1 was northwest of the project site adjacent to 14th Street. R2 was generally adjacent to the northern portion of the project site south of 14th Street. R3 was south of the project site near the intersection of Rice Road and Brockton Avenue. R4 was adjacent to the southern portion of the project site adjacent to Magnolia Avenue at Calvary Presbyterian Church. R5 was southeast of the project site at the intersection of Magnolia Avenue and 15th Street. R6 was east of the project site at the intersection of Magnolia Avenue and 14th Street. R7 was north of the project site north of 14th Street. The measured average noise levels and measurement locations are depicted in Table 8. The primary noise source at the sites mentioned in Table 8 was from traffic along the adjacent roads.

Construction activities associated with the parking structure Building O and the medical office Building P were ongoing during the noise measurement collection; these activities could only be heard by the noise specialist at the R7 location. The noise from the construction activities at the medical office building and the parking structure is reflected in the measured noise levels in Table 8; however, the primary sources of the noise levels depicted in Table 8 were vehicular noise and emergency vehicles. Based upon critical listening by the noise monitoring specialist during the measurements, construction noise from Building P and Building O was not a contributing factor to the noise measurements at Receptors 1–7 since the primary noise sources at the R1–R7 sites were vehicular travel and emergency vehicles.

Table 8
Measured Noise Levels

Receptors	Location/Address	Date	Time	Description	L_{eq} (dBA)	L_{max} (dBA)
1	Residential Property 4226 14th St. Riverside, CA 92501	June 12, 2013	3:00–3:20 p.m.	Along south side of 14th Street, approximately 25 feet from the center line	57.1	73.4
2	Riverside Community Players Theatre 4026 14th St. Riverside, CA 92501	June 12, 2013	3:40–4:00 p.m.	Along south side of 14th Street, elevated lower than the roadway, approximately 90 feet from the center line	57.1	72.1
3	Residential Property 4087 Rice Rd. Riverside, CA 92506	June 13, 2013	1:35–1:55 p.m.	Along east side of Brockton Avenue, approximately 88 feet from the center line	59.1	80.0
4	Calvary Presbyterian Church 4495 Magnolia Ave. Riverside, CA 92501	June 13, 2013	3:15–3:35 p.m.	Along west side of Magnolia Avenue, approximately 350 feet from the center line	56.6	74.3
5	Southwest corner of Magnolia Ave. and 15th St.	June 14, 2013	1:15–1:35 p.m.	Along east side of Magnolia Avenue, approximately 40 feet from the center line	64.2	77.8
6	Newman Park 4440 Magnolia Ave. Riverside, CA 92501	June 14, 2013	2:15–2:35 p.m.	Along east side of Magnolia Avenue, approximately 50 feet from the center line	68.5	88.7
7	Grant Elementary School 4011 14th St. Riverside, CA 92501	July 2, 2013	11:20–11:40 a.m.	Along north side of 14th Street, approximately 130 feet from the center line	66.4	89.5

L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval

6.0 FUTURE CONDITIONS

On-site noise-generating activities associated with the project would include short-term construction and demolition of existing buildings and long-term operational noise associated with hospital operations such as noise from emergency vehicles (e.g., ambulance sirens and helicopters), proposed parking structures and surface parking, and other on-site noise sources (such as emergency standby generators and HVAC equipment). The project would generate off-site traffic noise along various roads in the area. In addition, the project site will be subject to noise from Magnolia Avenue, 14th Street, and Brockton Avenue.

6.1 Short-Term Construction Noise and Vibration Impacts

Construction-Related Noise. Development activities for project construction would generally involve the following sequence: (1) demolition, (2) grading, (3) trenching, (4) building

construction, (5) architectural coating, and (6) paving. Specific project construction details and equipment fleet specifications are not available at this time. However, the following are typical types of construction equipment that would be expected:

- Concrete/industrial saws
- Dozers
- Tractors/loaders/backhoes
- Forklifts
- Welders
- Cement and mortar mixers
- Paving equipment
- Trenching equipment
- Off-highway water trucks
- Materials delivery trucks
- Pneumatic tools
- Excavators
- Graders
- Cranes
- Generator sets
- Air compressors
- Pavers
- Scrapers
- Rollers
- Concrete trucks
- Asphalt trucks.

The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is depicted in Table 9. The noise values represent maximum noise generation, or full-power operation of the equipment. As an example, a loader and two dozers, all operating at full power and relatively close together, would generate a maximum sound level of approximately 90 dB at 50 feet from their operations. As one increases the distance between equipment, or separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. In addition, typical operating cycles may involve 2 minutes of full-power operation, followed by 3 or 4 minutes at lower levels. The average noise level during construction activities is generally lower, since maximum noise generation may only occur up to 50% of the time.

Table 9
Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Air compressor	81
Backhoe	80
Compactor	82
Concrete mixer	85

Table 9
Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Concrete pump	82
Concrete vibrator	76
Crane, mobile	83
Dozer	85
Generator	81
Grader	85
Impact wrench	85
Jackhammer	88
Loader	85
Paver	89
Pneumatic tool	85
Pump	76
Roller	74
Saw	76
Truck	88

Source: FTA 2006.

The nearest off-site sensitive receptor to the project work would be the Calvary Presbyterian Church, located approximately 60 feet from the nearest point of planned construction (Phase IIc). A live performance theater (the Riverside Community Players Theatre) is located approximately 75 feet from planned construction (Phase I hospital bed tower). A small park (Newman Park) is located at the southeast corner of Magnolia Avenue and 14th Street, approximately 190 feet from the nearest construction point (Phase IIa). Evans Sports Complex is located south of the Calvary Presbyterian Church, approximately 450 feet away from the location of Phase IIc construction. The nearest residences (located adjacent to 14th Street, west of Brockton Avenue) would be approximately 435 feet from the nearest construction area (Phase I hospital bed tower). The nearest school (Grant Elementary School) would be approximately 285 feet from the construction area (Phase I hospital bed tower). The daycare facility on Magnolia Avenue and 15th Street would be approximately 560 feet from the construction area (Phase IIc) (see Figure 5, Off-Site Sensitive Receptors).

The noise levels from construction operations decrease at a rate of approximately 6 dB per doubling of distance from the source. Therefore, at a distance of 60 feet (the approximate distance from the nearest side of Phase IIc of the project to the church to the south), construction noise levels would be about 2 dB lower than shown in Table 9, ranging from approximately 72 to 87 dBA L_{eq}. At the nearest residences, it is estimated that the maximum noise levels from construction would range from approximately 55 to 70 dBA L_{eq}. The City's noise ordinance, Chapter 7.25.010, allows exceedances of these noise levels for short periods; however, the average noise levels would

nonetheless exceed the City's daytime ordinance standard. The estimated construction noise levels at nearby noise-sensitive land uses are summarized in Table 10.

Table 10
Short-Term (Construction) Noise Levels

Representative Noise-Sensitive Land Uses	Approximate Distance from Nearest Construction	Construction Noise Level Range (dBA L_{eq})	City of Riverside Noise Code Daytime Standard (dBA)
Calvary Presbyterian Church	60 feet to Phase IIc	72–87	60
Riverside Community Players Theatre	75 feet to Phase I hospital bed tower	70–85	60[a]
Newman Park	190 feet to Phase IIa	62–77	65
Grant Elementary School	285 feet to Phase I hospital bed tower	59–74	60
Residences – 14th St. west of Brockton Ave.	435 feet to Phase I hospital bed tower	55–70	55
Evans Sports Complex	450 feet to Phase IIc	55–70	65
Daycare facility– Magnolia Ave. and 15th St.	560 feet to Phase IIc	53–68	60

Source: City of Riverside 2007b; see Figure 5, Off-Site Sensitive Receptors.
[a] Since there is no specific land use category for theaters, the Community Support land use category in the City's Noise Ordinance was used for this analysis.

As shown in Table 10, construction activities associated with demolition of existing structures and construction of the project would exceed City of Riverside Noise Code standards and have the potential to adversely affect adjacent noise-sensitive uses (through annoyance, disruption of conversations, etc.), particularly at the nearest land uses such as the Calvary Presbyterian Church, the Riverside Community Players Theatre, Newman Park, Grant Elementary School, and residences on 14th Street west of Brockton Avenue. Weekday daytime activities at Calvary Presbyterian Church include, but are not limited to, bible study and staff meetings. Weekday daytime activities at the Riverside Community Players Theatre include programming for school children and offering opportunities for school field trips for students to see live theater. As such, noise from construction activities would represent a significant impact at nearby noise-sensitive land uses during the louder stages of construction/demolition. As a way to minimize impacts associated with construction noise, all phases and subphases (Phase I, Phase IIa, Phase IIb, and Phase IIc) of the project should be required to limit construction hours and to ensure that engine mufflers are in working order, among other mitigation measures. These measures are included as a part of the noise mitigation (Chapter 7.0, Mitigation).

Construction-Related Vibration. The heavier pieces of construction equipment used at the project site could include bulldozers, graders, cranes, loaded trucks, water trucks, and pavers. Ground-borne vibration information related to construction activities has been collected by

Caltrans (Caltrans 2004). Information from Caltrans indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inches/second begin to cause annoyance; therefore, 0.1 inches/second is considered to be the threshold used to determine the significance of construction-related vibration impacts. Potential for structural damage occurs at higher vibration levels. Ground-borne vibration is typically attenuated over short distances (typically on the order of 25 feet). The closest homes would be approximately 435 or more feet from the construction area (Phase I hospital bed tower), the nearest school (Grant Elementary School) would be approximately 285 feet from the construction area (Phase I hospital bed tower), the daycare on Magnolia Avenue and 15th Street would be approximately 560 feet from the construction area (Phase IIc), and Calvary Presbyterian Church would be approximately 60 feet from the nearest construction area (Phase IIc). At this distance and with the anticipated construction equipment, the peak particle velocity is estimated to be 0.024 inches/second at 60 feet, which would be well below 0.1 inches/second (the annoyance threshold) at the adjacent sensitive receptors mentioned above. Therefore, the vibration impact would be less than significant.

6.2 Long-Term Operational Noise Impact

Long-term operational noise associated with hospital operations includes noise from emergency vehicles (e.g., ambulance sirens, occasional helicopter arrivals and departures for trauma cases), proposed parking structures and surface parking, and other on-site noise generators (such as emergency standby generators and HVAC equipment). Long-term operational noises also include project-generated traffic and overall traffic noise at the site.

6.2.1 Emergency Vehicle and Helicopter Noise

Ambulances currently enter and exit the driveway between Buildings F and G from 14th Street (see Figure 3, Site Plan). Due to the increase of hospital licensed beds, it is assumed that there could be an increase in the number of emergency vehicles entering the hospital using sirens. During the noise field measurements on July 2, 2013, at Grant Elementary School, noise from an ambulance using the siren was measured traveling westbound on 14th Street (refer to R7 on Figure 4, Noise Measurement Locations). The loudest noise level measured at a distance of approximately 130 feet from the measurement location was 89.5 dBA L_{max}. Although there could be some incremental increase in siren noise, noise from emergency vehicles would be relatively brief and periodic in nature and would cease once the emergency vehicle has either entered or exited the area. Therefore, impacts from increased emergency vehicle use would be less than significant.

An existing helipad is located approximately 13.5 feet above the top level of the parking structure along 14th Street (identified as G on Figure 3, Site Plan). The existing helipad consists of an approximately 54-foot-square touchdown and liftoff area on an elevated metal landing pad with associated gurney ramp, safety net, wind cone, lighting, and painted

markings. Primary arrival/departure approaches are east and west of the helipad. The helipad is used to accommodate public service helicopters (as large as the Sikorsky Blackhawk, 64.8 feet in length) for community disaster preparedness, and to accommodate Emergency Medical Service helicopters. As stated in the City's Conditional Use Permit (CUP) Case P09-0693 and Design Review (DR) Case P09-0694 for the helipad, approximately 12 landings per month will occur, and the heaviest use is typically during non-school hours, such as late evenings and weekends. Based on the noise analysis that was prepared for the existing heliport, the City determined in its CUP and DR cases (City of Riverside 2010) that the heliport would not generate noise levels that would be detrimental to surrounding uses or would be out of compliance with the City's Noise Code. No change in noise from helicopter/helipad operations is anticipated as part of this project. The existing helipad would not change locations, and no increase in helicopter operations is proposed or anticipated as part of this project. Therefore, helicopter noise levels would remain as they are in the existing scenario, and impacts from helicopter noise as they relate to this project would be less than significant.

6.2.2 Proposed Parking Structures and Surface Parking Noise

Traffic associated with the proposed parking garage structures and surface parking noise would not be of sufficient volume to exceed community noise standards based on a time-averaged scale such as the CNEL or L_{eq} scale. However, the instantaneous maximum sound levels generated by a car door slamming, an engine starting up, or cars passing by could be annoying to people at Calvary Presbyterian Church (closest sensitive receptor). Tire squeal associated with the parking structure likely would not be a factor, as the parking structure would be designed and conditioned to include surfaces that reduce noise generated by tire squeal.

Other noise generated by parking activities is an instantaneous rather than a steady noise level. Therefore, L_{max} is the most appropriate noise metric applicable to parking activities. Table 11 provides estimates of the maximum noise levels associated with common parking lot activities. The noise levels are presented at a distance of 50 feet from the source and represent the maximum noise level generated. A range is given to reflect the variability of noise generated by various automobile types and driving styles.

Table 11
Typical Noise Levels Resulting from Parking Lot Activities

Event	Maximum Noise Level at 50 Feet (dBA L_{max})
Door slamming	60–70
Engine starting up [a]	60–70
Car passing by [b]	55–70

Source: Mestre Greve Associates 2011.
[a] Higher values from poor muffler systems.
[b] Typical values were in the low 60s.

No surface parking or parking structures are proposed as part of Phase I of the project. However, surface parking or parking structures may be proposed during Phase IIa, IIb, or IIc of the project. Site-specific proposed parking areas are not available at this time. In the event that future surface parking or parking structures are proposed during Phase IIa, IIb, or IIc, a noise study shall be conducted to determine the maximum noise level to sensitive receptors from a door slam, engine startup, or a car passing by. Such measures may include, but are not restricted to, the following: requirement of pavement treatments to reduce or eliminate tire squeal, administrative measures such as restricted speed limits and active enforcement thereof, or restricted parking hours.

6.2.3 On-Site Noise Generators

On-site stationary equipment such as emergency standby generators, the central plant, and HVAC equipment could be mounted on roofs or at the ground level of the hospital or hospital-related facilities. HVAC units would be located on the top of the hospital towers and medical office buildings and surrounded by rooftop parapet walls; thus, noise-sensitive receivers would not have a direct view of them.

The specific details (sizes, manufacturers, and models) of the equipment have not yet been determined. The noise levels generated by this equipment would vary, but would typically range from approximately 45 dBA to 55 dBA at a distance of 50 feet. Table 12 presents the estimated noise levels projected out to the nearest noise-sensitive land use from on-site stationary equipment. As shown in Table 12, noise levels from stationary equipment would not exceed the City's noise standards, provided that the noise levels from the equipment selected for the project do not exceed the assumed noise range (i.e., 45 to 55 dBA at a reference distance of 50 feet) by more than 7 dB.

Table 12
Noise from On-Site Stationary Equipment

Representative Noise-Sensitive Land Uses	Approximate Distance from Stationary Equipment Noise Source	Estimated Noise Level (dBA L_{eq})[a]	City of Riverside Noise Code Daytime/ Nighttime Standard (dBA L_{eq})
Calvary Presbyterian Church	60 feet to Phase IIc	43–53	60/60
Riverside Community Players Theatre	75 feet to Phase I hospital bed tower	41–51	60/60
Newman Park	190 feet to Phase IIa	33–43	65/65
Grant Elementary School	285 feet to Phase I hospital bed tower	30–40	60/60

Table 12
Noise from On-Site Stationary Equipment

Representative Noise-Sensitive Land Uses	Approximate Distance from Stationary Equipment Noise Source	Estimated Noise Level (dBA L_{eq})[a]	City of Riverside Noise Code Daytime/ Nighttime Standard (dBA L_{eq})
Residences, 14th St. west of Brockton Ave.	435 feet to Phase I hospital bed tower	26–36	55/45
Evans Sports Complex	450 feet to Phase IIc	26–36	65/65
Daycare, Magnolia Ave. and 15th St.	560 feet to Phase IIc	24–34	60/60

[a] Conservatively neglects additional noise reduction from intervening structures such as parapet walls or other buildings.

To ensure that noise from HVAC equipment, central plant equipment, and the emergency standby generator would not cause an exceedance of the City's Municipal Code Noise Code standards (e.g., 45 dBA L_{eq} nighttime/55 dBA L_{eq} daytime for residences, 60 dBA L_{eq} daytime or nighttime for community support land uses), a requirement will be included as a mitigation measure for all phases and subphases (Phase I, Phase IIa, Phase IIb, and Phase IIc) of construction that the on-site stationary noise sources, once selected, be reviewed by an acoustical specialist.

With the inclusion of this mitigation measure for operational noise impacts from stationary sources such as HVAC equipment and central plant equipment, on-site noise related to the project would meet the City's noise standards per Table 12.

6.2.4 Off-Site Traffic Noise Level

The project would generate traffic along adjacent roads including Magnolia Avenue, 14th Street, and Brockton Avenue. The City does not have a specific noise criterion for evaluating off-site noise impacts to residences or noise-sensitive areas from project-related traffic. Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound levels of 1 dB when exposed to steady, single-frequency signals in the mid-frequency range. Outside such controlled conditions, the trained ear can detect changes of 2 dB in normal environmental noise. The average healthy ear can barely perceive noise level changes of 3 dB. A change of 5 dB is readily perceptible, and a change of 10 dB is perceived as twice as loud or half as loud. A doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level. As noted in the City's GP 2025 Final EIR (2007d), noise analysis methodology is accurate only to the nearest whole decibel and most people only notice a change in the noise environment when the difference in noise levels is around 3 dB. An increase or decrease in noise level of at least 5 dB is required before any noticeable change in community response would be expected. Therefore, a clearly perceptible increase (+5 dB) in noise exposure

of sensitive receptors could be considered significant (City of Riverside 2007d). Therefore, for the purposes of this noise study, impacts are considered significant when they cause an increase of 5 dB from existing noise levels or exceed the 65 dBA CNEL noise threshold.

The existing plus project traffic noise would generate a noise level increase of 1 dB or less (rounded to whole numbers) along the studied roads in the vicinity of the site. The additional traffic volume along the adjacent roads would not substantially increase the existing noise level in the project vicinity and the traffic noise level increase is considered less than significant. The noise level increases associated with the additional traffic volume are depicted in Table 13.

Table 13
Project-Related Traffic Noise: Existing

Modeled Receptor	Roadway Segment	Existing ADT	Existing + Project ADT	Existing Noise Level (dBA CNEL)	Existing + Project Noise Level (dBA CNEL)	Noise Level Increase (dB)
R1: Residences	14th St.: west of Brockton Ave.	3,099	3,272	60	61	1
R2: Riverside Community Players Theatre	14th St.: Brockton Ave. to Magnolia Ave.	11,491	13,917	61	62	1
R3: Residences	Brockton Ave.: Tequesquite Ave. to Ramona Dr.	14,332	15,776	62	62	0
R4: Calvary Presbyterian Church	Magnolia Ave.: 14th St. to 15th St.	27,031	27,493	56	56	0
R5: Daycare	Magnolia Ave.: 14th St. to 15th St.	27,031	27,493	67	67	0
R6: Newman Park	Magnolia Ave.: 14th St. to 15th St.	27,031	27,493	69	69	0
R7: Grant Elementary School	14th St.: Brockton Ave. to Magnolia Ave.	11,491	13,917	64	65	1

Source: FHWA 2004.

The project's traffic study analyzed project ADT to Year 2035. Traffic modeling data is not reliable beyond that year, which is why beyond Year 2035 was not analyzed for the project. With the project, the Year 2035 (e.g., existing plus ambient growth plus cumulative plus project ADT) traffic noise would generate a noise level increase of approximately 1 dB or less compared to the Year 2035 without project scenario. Therefore, the additional project traffic volume along the adjacent roads would not substantially increase the existing noise level in the project vicinity and the traffic noise level increase is considered less than significant. The noise level increases associated with the Year 2035 conditions are depicted in Table 14.

Table 14
Project-Related Traffic Noise: Year 2035

Modeled Receptor	Roadway Segment	Year 2035 Without Project ADT	Year 2035 + Project ADT	2035 Without Project Noise Level (CNEL)	2035 + Project Noise Level (CNEL)	Noise Level Increase (dB)
R1: Residences	14th St.: west of Brockton Ave.	351	524	54	55	1
R2: Riverside Community Players Theatre	14th St.: Brockton Ave. to Magnolia Ave.	18,748	21,174	63	63	0
R3: Residences	Brockton Ave.: Tequesquite Ave. to Ramona Dr.	20,773	22,217	64	64	0
R4: Calvary Presbyterian Church	Magnolia Ave.: 14th St. to 15th St.	29,671	30,133	57	58	1
R5: Daycare	Magnolia Ave.: 14th St. to 15th St.	29,671	30,133	69	69	0
R6: Newman Park	Magnolia Ave.: 14th St. to 15th St.	29,671	30,133	70	70	0
R7: Grant Elementary School	14th St.: Brockton Ave. to Magnolia Ave.	18,748	21,174	66	67	1

Source: FHWA 2004.

7.0 MITIGATION

To mitigate the on-site noise impacts associated with construction activities and operational noise to the surrounding sensitive receptors discussed above, the mitigation measures provided in the following sections should be required by the City.

7.1 Construction Noise Mitigation

In order to reduce impacts related to heavy construction equipment moving and operating on site during all phases and subphases (Phase I, Phase IIa, Phase IIb, and Phase IIc) of demolition, grading, and construction, prior to issuance of Grading Permits, the Applicant shall ensure that the following procedures are followed:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers.

- Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible.
- During construction, stationary construction equipment shall be placed such that noise is directed away from or shielded from sensitive noise receivers where feasible.
- During construction, stockpiling and vehicle staging areas shall be located as far as practical from noise-sensitive receptors.
- The project shall be in compliance with the City of Riverside's Municipal Code: Construction shall occur on weekdays between the hours of 7:00 a.m. and 7:00 p.m. on weekdays, and between 8:00 a.m. and 5:00 p.m. on Saturdays. Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners and residents to contact the job superintendent. In the event the City receives a complaint, appropriate corrective actions (e.g., replacement of faulty exhaust muffler, ensuring that engine compartment access panels are closed and secured) shall be implemented and a report of the action provided to the reporting party.

Reductions in construction noise from the measures listed above are difficult to quantify due to the variables involved (e.g., the specific equipment types, the condition of each piece of equipment prior to implementation of noise reduction measures). For example, improved mufflers can reduce exhaust noise by approximately 6 to 15 decibels (Eaton 2000); thus, replacing a faulty or poorly fitted muffler could reduce exhaust noise by as much as 6 to 15 decibels. However, using a muffler in such a way would achieve a noise reduction for the exhaust component of the equipment only, and only for the individual piece of equipment so treated. Thus the overall reduction in construction noise from using a muffler would depend to a large extent on the locations of each piece of equipment relative to the noise-sensitive receivers, which in this case generally surround the project site. Similarly, relocating a construction staging/laydown area from a southerly location on the site to a more northerly location would reduce construction noise at receivers to the south, but not by a sufficient amount so as to meet the City's noise standard of 60 dBA.[1] For these reasons, the mitigation measures recommended above would reduce construction noise levels, but since they will not completely reduce noise levels to levels below the City's standard, impacts from construction noise are considered significant.

[1] Based upon Table 10, a noise reduction of up to 27 decibels would be needed to meet a 60 dBA L_{eq} noise level. In order to achieve such a reduction, the distance from source to receiver would need to be increased to well beyond the boundaries of the project site.

7.2 Parking Noise Mitigation

If surface parking or parking structures are proposed during Phase IIa, IIb, or IIc of the project, the project proponent shall retain an acoustical specialist to conduct an analysis of noise effects from the proposed parking facilities at nearby noise-sensitive land uses, and to provide mitigation measures to reduce or eliminate noise impacts to the extent feasible. Such measures may include, but are not restricted to, the following: requirement of pavement treatments to reduce or eliminate tire squeal, administrative measures such as restricted speed limits and active enforcement thereof, or restricted parking hours.

7.3 Operational Noise Mitigation

Because the HVAC equipment, boilers, and generators can generate noise that could affect surrounding sensitive receptors for all phases and subphases (Phase I, Phase IIa, Phase IIb, and Phase IIc) of the project if not placed inside buildings or enclosures or otherwise shielded from receptors, and because the details, specifications, and locations of these facilities is not known yet, the project proponent shall retain an acoustical specialist to review project construction-level plans at every phase and subphase (Phase I, Phase IIa, Phase IIb, and Phase IIc) of the project to ensure that the equipment specifications and plans for HVAC, central plant, and emergency generator equipment incorporate measures that will reduce noise levels to below 60 dBA or less at the property line shared by the hospital and Calvary Presbyterian Church and will not otherwise result in the project exceeding relevant noise standards at nearby noise-sensitive land uses (e.g., recreation, residential). Prior to the commencement of construction for all phases and subphases (Phase I, Phase IIa, Phase IIb, and Phase IIc) of the project, the acoustical specialist shall certify, in writing, to the City that the equipment specifications and plans incorporate measures that will achieve the relevant noise limits provided that detailed project plans show the mechanical equipment and the equipment manufacturer's specifications with noise emission levels.

This concludes our noise assessment. Should you have any questions, please contact me at 949.373.8317 or via email at mgreene@dudek.com.

Sincerely,

Mike Greene, INCE Bd. Cert.
Acoustician

Att: Figure 1: Regional Map
Figure 2: Vicinity Map
Figure 3: Site Plan
Figure 4: Noise Measurement Locations
Figure 5: Off-Site Sensitive Receptors

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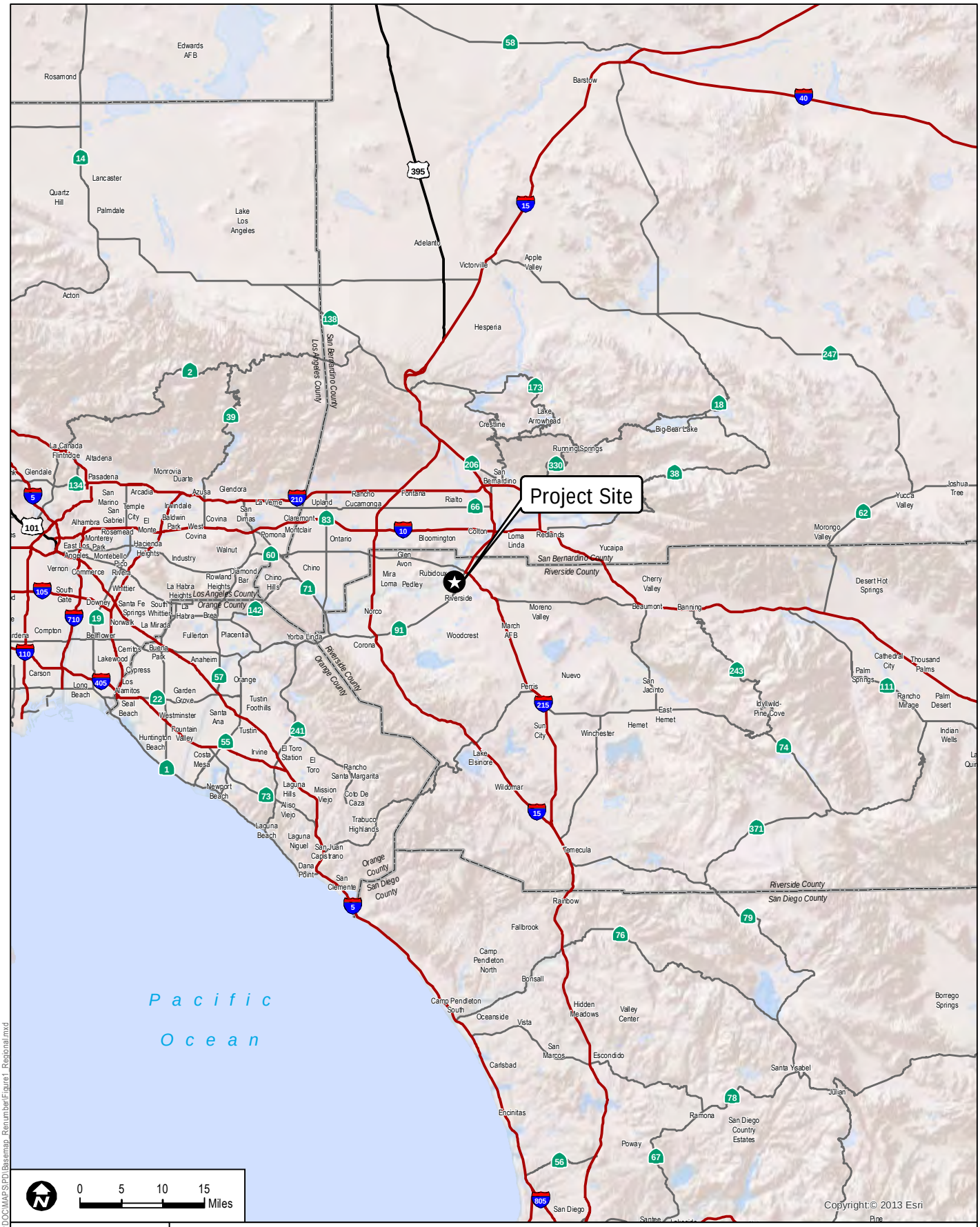


DUDEK

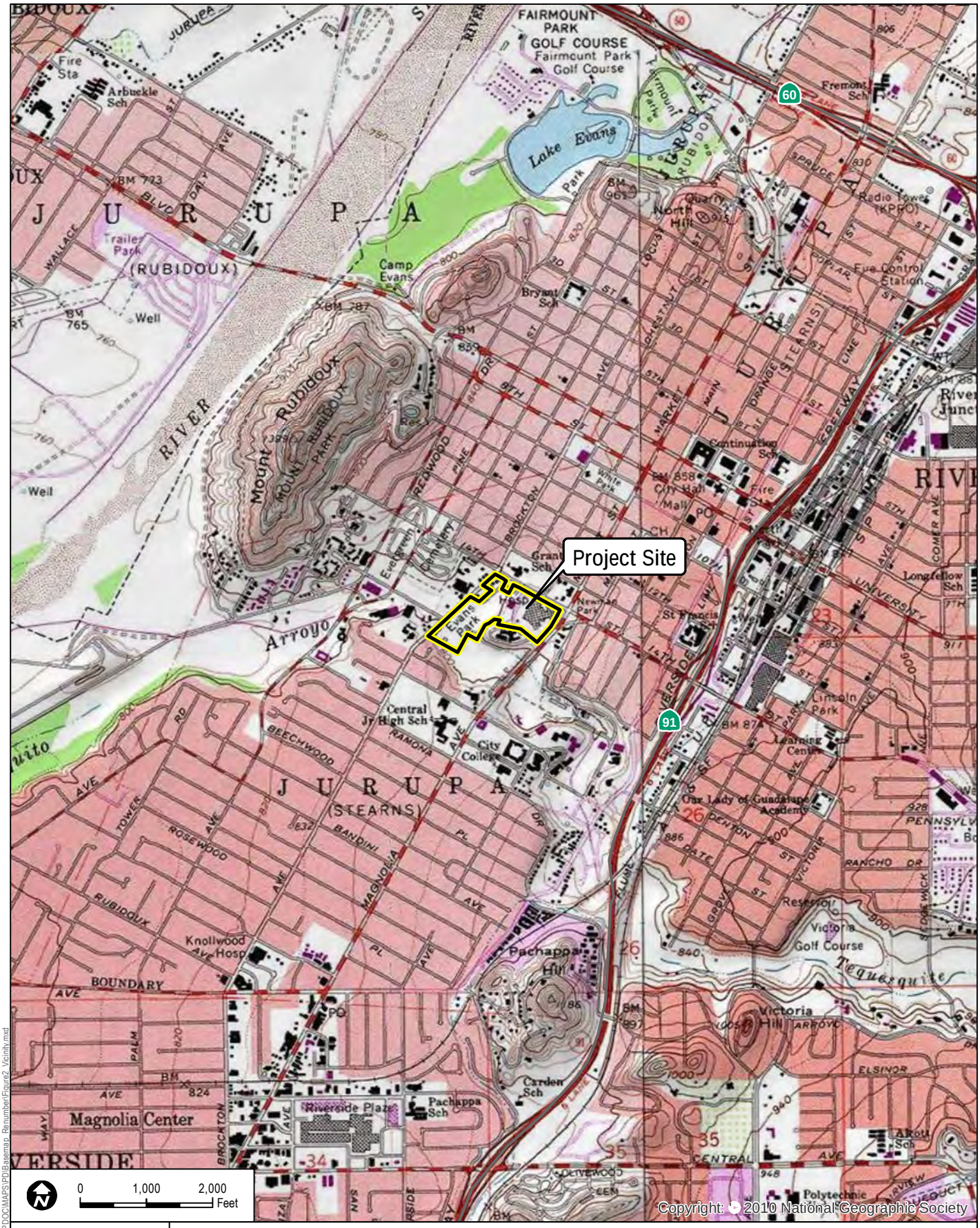
7824-01

SOURCE: ESRI 2013

FIGURE 1
Regional Map

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

Path: Z:\Projects\7824001\MAPDOC\MAPS\PD\Basemap_Renumber\Figure1_Regional.mxd



DUDEK

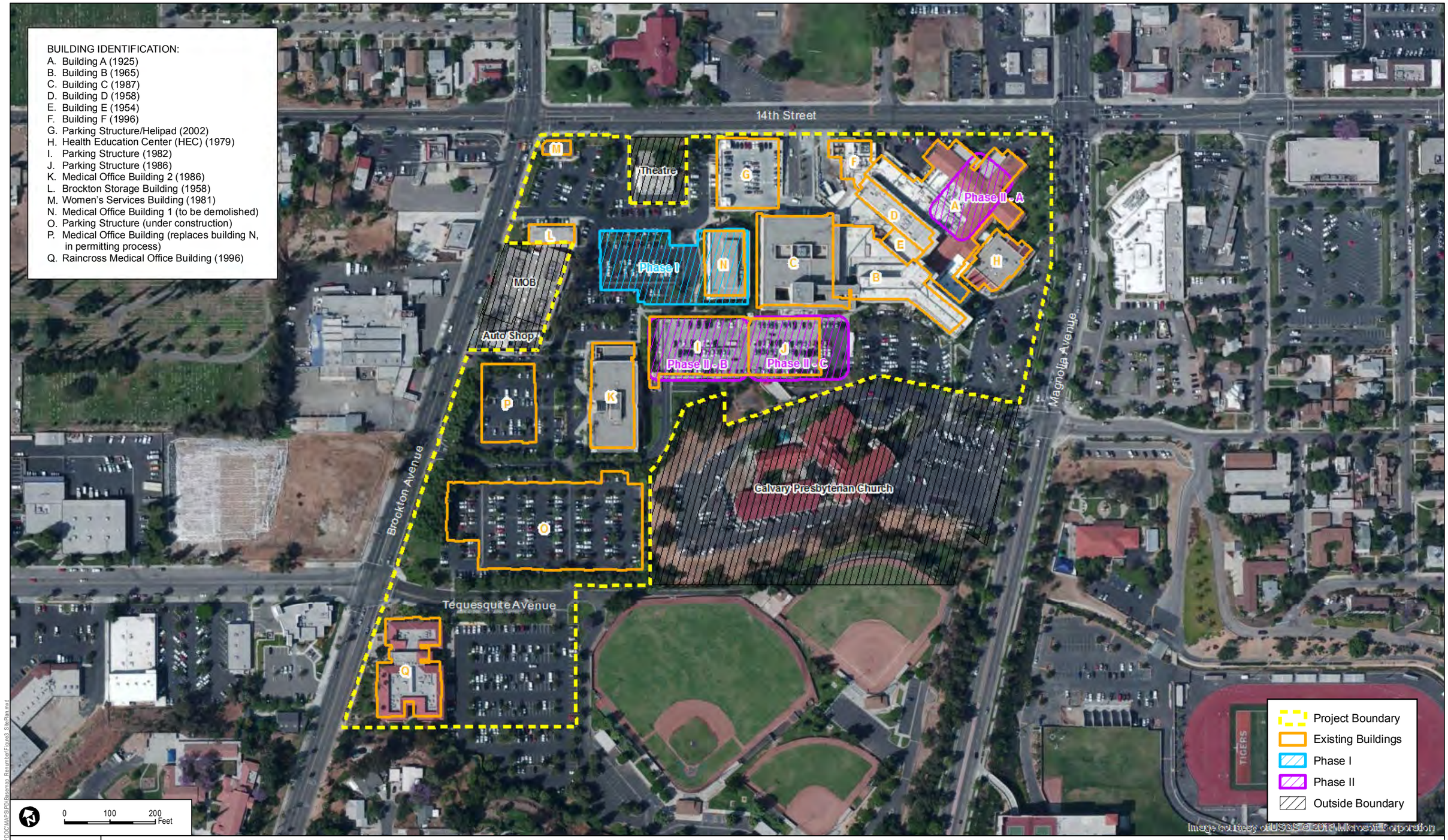
7824-01

SOURCE: USGS 7.5-Minute Series Quadrangle (Riverside West, Riverside East)

FIGURE 2
Vicinity Map

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

Path: Z:\Projects\782401\MAPDOC\MAPS\PD\Basemap_Renumber\Figure2_Vicinity.mxd



DUDEK

7824-01

SOURCE: Kimley-Horn and Associates 5/20/2013, Perkins+Will 5/20/2013, BING 2013

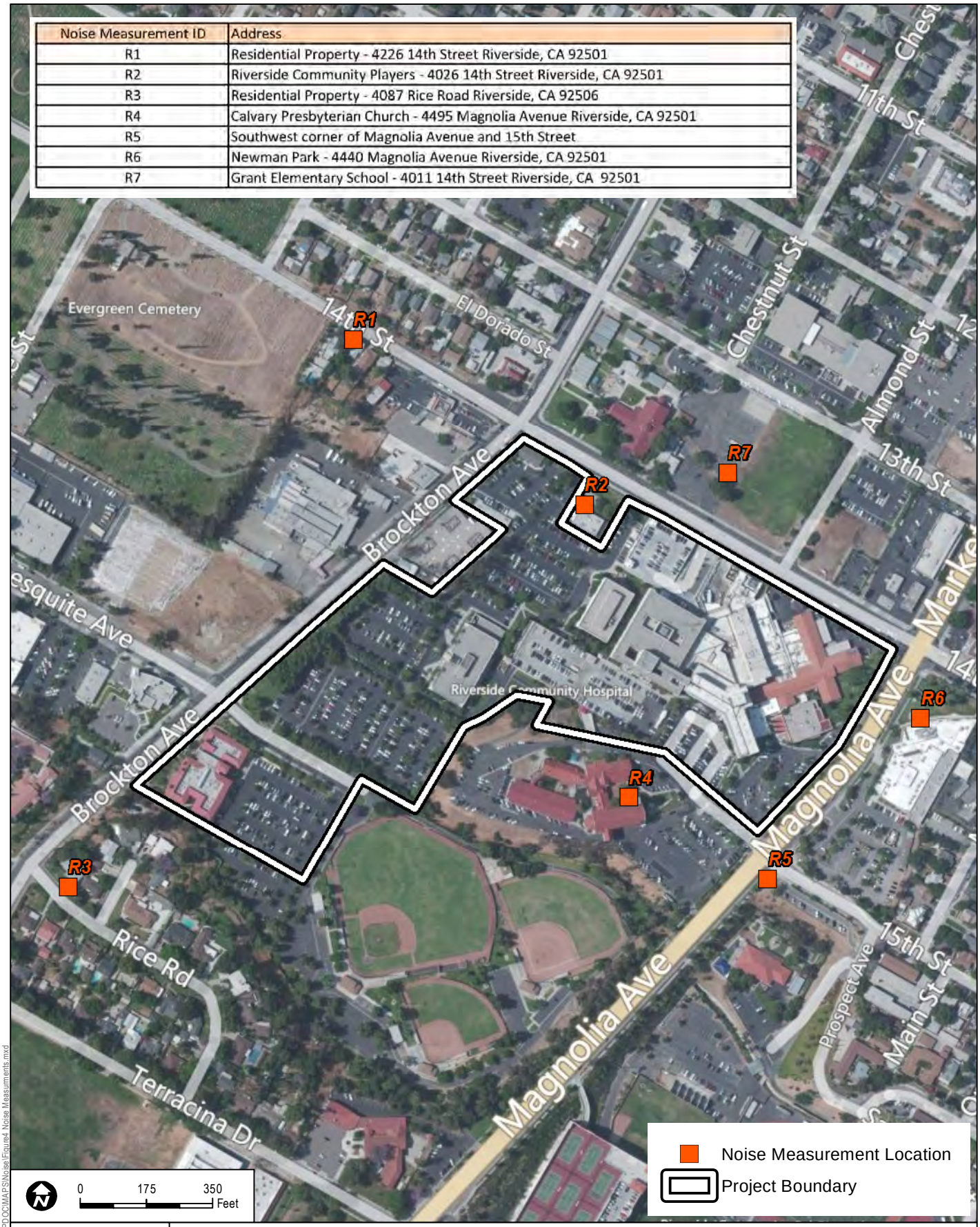
FIGURE 3

Site Plan

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

Path: Z:\Projects\7824\01\MAPDOC\MAPS\PD\Basemap_Renumber\Figure3_SitePlan.mxd

Noise Measurement ID	Address
R1	Residential Property - 4226 14th Street Riverside, CA 92501
R2	Riverside Community Players - 4026 14th Street Riverside, CA 92501
R3	Residential Property - 4087 Rice Road Riverside, CA 92506
R4	Calvary Presbyterian Church - 4495 Magnolia Avenue Riverside, CA 92501
R5	Southwest corner of Magnolia Avenue and 15th Street
R6	Newman Park - 4440 Magnolia Avenue Riverside, CA 92501
R7	Grant Elementary School - 4011 14th Street Riverside, CA 92501



DUDEK

7824-01

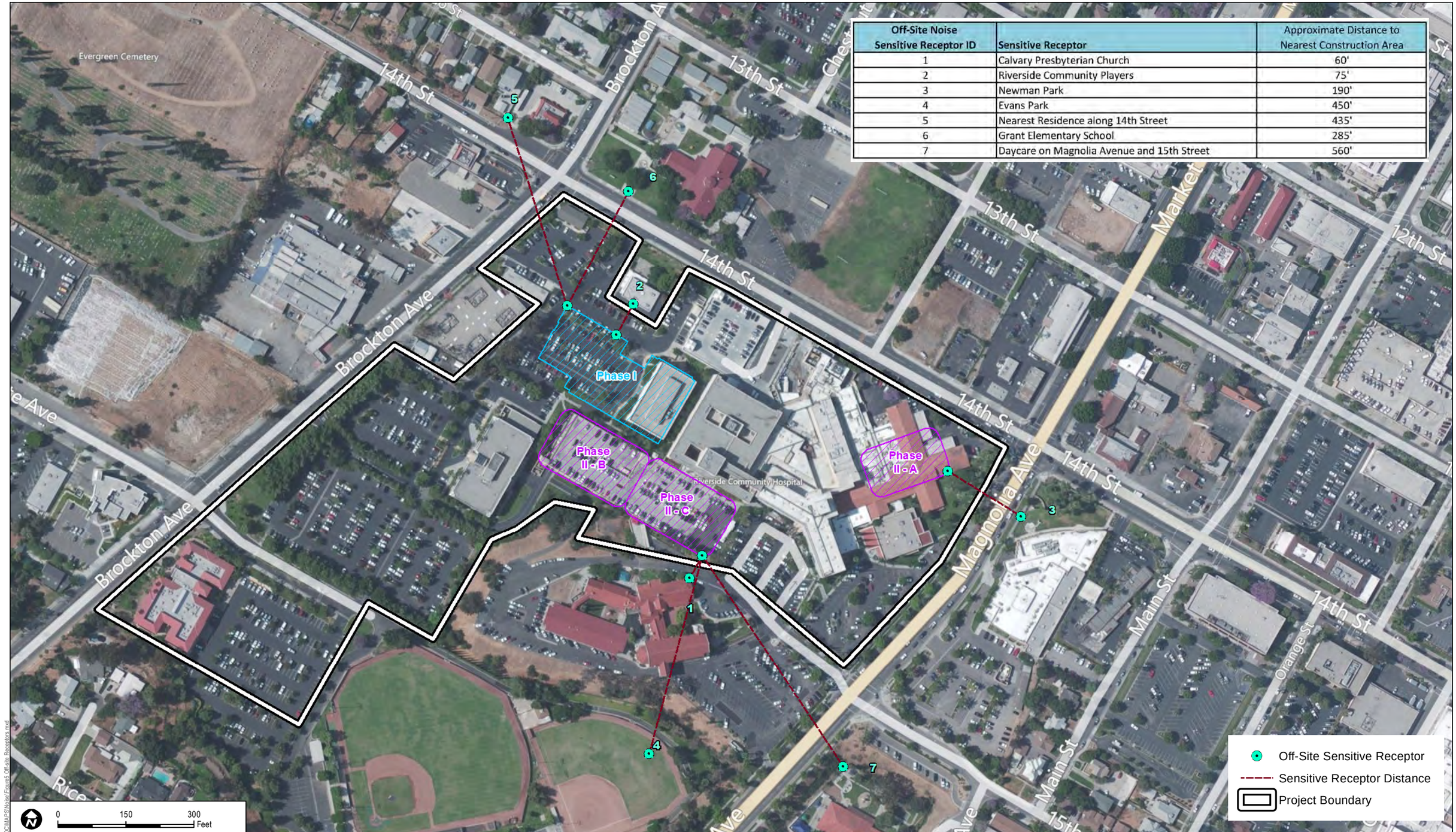
SOURCE: BING MAPPING SERVICE

FIGURE 4

Noise Measurement Locations

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

Path: Z:\Projects\782401\MAPDOC\MAPS\Noise\Figure4_Noise Measurments.mxd



Off-Site Noise Sensitive Receptor ID	Sensitive Receptor	Approximate Distance to Nearest Construction Area
1	Calvary Presbyterian Church	60'
2	Riverside Community Players	75'
3	Newman Park	190'
4	Evans Park	450'
5	Nearest Residence along 14th Street	435'
6	Grant Elementary School	285'
7	Daycare on Magnolia Avenue and 15th Street	560'

DUDEK

7824-01

SOURCE: BING MAPPING SERVICE

RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT

FIGURE 5

Off-Site Sensitive Receptors

Path: Z:\Projects\7824\01\MAP\DOC\MAPS\Noise\Figure5_Offsite_Receptors.mxd

APPENDIX H

Utilities

Appendix H, Table A

Existing and Approved Riverside Community Hospital Uses on Site – Baseline Conditions with Anticipated Solid Waste Generation Rates

ID on Figure 2.0-3	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action	Waste Generation Rate*	Unit of Measure	Total lb/day	Total Tons/day
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	No change	0.006	lb/sq ft/day	352.23	0.18
B	Building B	Hospital	176,040	273	1965	No change	16	lb/bed/day	4,368.00	2.18
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change	16	lb/bed/day	544.00	0.27
D	Building D	Hospital	41,431	66	1958	No change	16	lb/bed/day	1,056.00	0.53
E	Building E	Hospital	3,565	N/A	1954	No change	0.006	lb/sq ft/day	21.39	0.01
F	Building F	Hospital	1,077	N/A	1996	No change	0.006	lb/sq ft/day	6.46	0.00
G	Parking structure	Parking	59,500	N/A	2002	No change	0.006	lb/sq ft/day	357.00	0.18
H	Health education center	Meeting rooms	12,543	N/A	1979	No change	0.006	lb/sq ft/day	75.26	0.04
I	Parking structure	Parking	96,084	N/A	1982	No change	0.006	lb/sq ft/day	576.50	0.29
J	Parking structure	Parking	101,049	N/A	1986	No change	0.006	lb/sq ft/day	606.29	0.30
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change	0.006	lb/sq ft/day	393.02	0.20
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change	0.006	lb/sq ft/day	26.70	0.01
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change	0.006	lb/sq ft/day	11.40	0.01
N	Medical office building 1	Medical offices	61,135	N/A	1975	No change	0.006	lb/sq ft/day	366.81	0.18
O	Parking structure	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Under construction; anticipated construction completion February of 2014	0.006	lb/sq ft/day	2,313.00	1.16
P	Medical office building	Medical offices	61,000	N/A	Construction anticipated to be completed 2014	Under construction; anticipated construction completion March of 2014	0.006	lb/sq ft/day	366.00	0.18
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change	0.006	lb/sq ft/day	346.52	0.17
		Total Square Footage	1,298,686					Total	11,786.59	5.89

*Sources:

CalRecycle 2013a. Waste Characterization, Public Sector and Instituations: Estimated Solid Waste Generation Rates. Accessed on October 23, 2013. http://www.calrecycle.ca.gov/wastechar/wastegenrates/Institution.htm.

CalRecycle 2013b. Waste Characterization, Commercial Sector: Estimated Solid Waste Generation and Disposal Rates. Accessed on October 28, 2013. http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm.

Appendix H, Table B

Existing and Approved Riverside Community Hospital Uses on Site – Phase I with Anticipated Solid Waste Generation Rates

ID on Figure 2.0-3	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action	Waste Generation Rate*	Unit of Measure	Total lb/day	Total Tons/day
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	Dietary/lab to move to the Phase I bed tower; Building A used for hospital administrative support	0.006	lb/sq ft/day	352.23	0.18
B	Building B	Hospital	176,040	273	1965	No change in footprint, but seismic upgrades needed	16	lb/bed/day	4,368.00	2.18
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change	16	lb/bed/day	544.00	0.27
D	Building D	Hospital	41,431	66	1958	No change in footprint, but seismic upgrades needed	16	lb/bed/day	1,056.00	0.53
E	Building E	Hospital	3,565	N/A	1954	No change	0.006	lb/sq ft/day	21.39	0.01
F	Building F	Hospital	1,077	N/A	1996	No change	0.006	lb/sq ft/day	6.46	0.00
G	Parking structure	Parking	59,500	N/A	2002	No change	0.006	lb/sq ft/day	357.00	0.18
H	Health education center	Meeting rooms	12,543	N/A	1979	No change	0.006	lb/sq ft/day	75.26	0.04
I	Parking structure	Parking	96,084	N/A	1982	No change	0.006	lb/sq ft/day	576.50	0.29
J	Parking structure	Parking	101,049	N/A	1986	No change	0.006	lb/sq ft/day	606.29	0.30
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change	0.006	lb/sq ft/day	393.02	0.20
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change	0.006	lb/sq ft/day	26.70	0.01
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change	0.006	lb/sq ft/day	11.40	0.01
N	Medical office building 1	Medical offices	-61,135	N/A	1975	To be demolished as part of Phase I of the proposed project	0.006	lb/sq ft/day	-366.81	-0.18
O	Parking structure	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Part of baseline conditions	0.006	lb/sq ft/day	2,313.00	1.16
P	Medical office building	Medical offices	61,000	N/A	Construction anticipated to be completed 2014	Part of baseline conditions	0.006	lb/sq ft/day	366.00	0.18
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change	0.006	lb/sq ft/day	346.52	0.17
Phase I	New Phase I hospital bed tower	Hospital	251,500	189		Phase I of the proposed project	16	lb/bed/day	3,024.00	1.51
		Total Square Footage**	1,489,051					Total	14,076.97	7.04

Shaded rows represent changes from baseline conditions.

*Sources:

CalRecycle 2013. Waste Characterization, Public Sector and Instituations: Estimated Solid Waste Generation Rates. Accessed on October 23, 2013. http://www.calrecycle.ca.gov/wastechar/wastegenrates/Institution.htm.

CalRecycle 2013. Waste Characterization, Commercial Sector: Estimated Solid Waste Generation and Disposal Rates. Accessed on October 28, 2013. http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm.

**Building N is not calculated in the total square footage as it is being demolished as part of Phase I of the proposed project.

Appendix H, Table C

Existing and Approved Riverside Community Hospital Uses on Site – Phases I, IIa, and IIb with Anticipated Solid Waste Generation Rates

ID on Figure 2.0-3	Building/Structure	Use	Square Footage	Number of Licensed Beds	Year Constructed	Action	Waste Generation Rate*	Unit of Measure	Total lb/day	Total Tons/day
A	Building A	Hospital – lab, dietary, administration services	58,705	N/A	1925	To be demolished as part of Phase IIa of the proposed project	0.006	lb/sq ft/day	352.23	0.18
B	Building B	Hospital	176,040	273	1965	Part of Phase IIb of the proposed project: 273 beds will be moved to the new Phase IIb replacement bed tower; Building B will be used for outpatient, skilled nursing, support, and education	16	lb/bed/day	4,368.00	2.18
C	Building C	Hospital – ICU and med/surg	111,450	34	1987	No change	16	lb/bed/day	544.00	0.27
D	Building D	Hospital	41,431	66	1958	Part of Phase IIb of the proposed project: 66 beds will be moved to the new Phase IIb replacement bed tower; Building D will be used for outpatient, skilled nursing, support, and education	16	lb/bed/day	1,056.00	0.53
E	Building E	Hospital	3,565	N/A	1954	No change	0.006	lb/sq ft/day	21.39	0.01
F	Building F	Hospital	1,077	N/A	1997	No change	0.006	lb/sq ft/day	6.46	0.00
G	Parking structure	Parking	59,500	N/A	2002	No change	0.006	lb/sq ft/day	357.00	0.18
H	Health education center	Meeting rooms	12,543	N/A	1979	No change	0.006	lb/sq ft/day	75.26	0.04
I	Parking structure	Parking	96,084	N/A	1983	To be demolished as part of Phase IIb of the proposed project	0.006	lb/sq ft/day	576.50	0.29
J	Parking structure	Parking	101,049	N/A	1983	To be demolished as part of Phase IIb of the proposed project	0.006	lb/sq ft/day	606.29	0.30
K	Medical office building 2	Cancer center	65,503	N/A	1986	No change	0.006	lb/sq ft/day	393.02	0.20
L	Brockton Storage Building	Storage	4,450	N/A	1958	No change	0.006	lb/sq ft/day	26.70	0.01
M	Women's services building	Community outreach, lactation building	1,900	N/A	1981	No change	0.006	lb/sq ft/day	11.40	0.01
N	Medical office building 1	Medical offices	-61,135	N/A	1975	To be demolished as part of Phase I of the proposed project	0.006	lb/sq ft/day	-366.81	-0.18
O	Parking structure	Parking – 1,060 spaces	385,500	N/A	Construction anticipated to be completed 2014	Part of baseline conditions	0.006	lb/sq ft/day	2,313.00	1.16
P	Medical office building	Medical offices	60,897	N/A	Construction anticipated to be completed 2014	Part of baseline conditions	0.006	lb/sq ft/day	365.38	0.18
Q	Raincross Medical Office Building	Medical offices	57,754	N/A	1996	No change	0.006	lb/sq ft/day	346.52	0.17
I	New Phase I hospital bed tower	Hospital	251,500	189		Part of Phase I of the proposed project	16	lb/sq ft/day	3,024.00	1.51
IIb	New Phase II replacement bed tower	Hospital	600,000	339		Part of Phase IIb of the proposed project	16	lb/sq ft/day	5,424.00	2.71
IIa	Mixed-use building in location of Building A	Medical offices	100,000	N/A		Phase IIa of the proposed project	0.006	lb/sq ft/day	600.00	0.30
IIc***	Mixed-use building in northeast corner of site	Hospital and Medical offices	200,000			Phase IIc of the proposed project	0.006	lb/sq ft/day	1,200.00	0.60
			20,000	30			16	lb/sq ft/day	480.00	0.24
		Total Square Footage**	1,994,245					Total	21,780.35	10.89

*Sources:

CalRecycle 2013. Waste Characterization, Public Sector and Instituations: Estimated Solid Waste Generation Rates. Accessed on October 23, 2013. http://www.calrecycle.ca.gov/wastechar/wastegenrates/Institution.htm.

CalRecycle 2013. Waste Characterization, Commercial Sector: Estimated Solid Waste Generation and Disposal Rates. Accessed on October 28, 2013. http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm.

**Building N is not calculated in the total square footage as it is being demolished as part of Phase I of the proposed project.

*** The exact square footage and number of beds for Phase IIc is not known at this time. The square footage is an estimate that would be in addition to the number of beds.

APPENDIX I

Traffic Impact Assessment and Parking Analysis

Traffic Impact Analysis

for the:

Riverside Community Hospital Specific Plan Expansion Project

In the City of Riverside

Prepared for:

Hospital Corporation of America

January, 2014

© Kimley-Horn and Associates, Inc.

095680000

TRAFFIC IMPACT ANALYSIS
FOR
RIVERSIDE COMMUNITY HOSPITAL SPECIFIC PLAN
EXPANSION PROJECT
IN THE CITY OF RIVERSIDE

Prepared for:

Hospital Corporation of America
One Park Plaza
Bldg 2, 3rd floor
Nashville, Tennessee 37203

Prepared by:

Kimley-Horn and Associates, Inc.

January, 2014

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TRAFFIC IMPACT ANALYSIS
FOR THE
RIVERSIDE COMMUNITY HOSPITAL SPECIFIC PLAN
EXPANSION PROJECT
IN THE CITY OF RIVERSIDE

INTRODUCTION

This Traffic Impact Analysis has been prepared to evaluate the traffic-related impacts associated with the proposed Riverside Community Hospital (RCH) Specific Plan Expansion Project in the City of Riverside. The project site is shown in its regional setting on **Figure 1.**

PROJECT DESCRIPTION

Existing RCH Campus

The Riverside Community Hospital campus occupies approximately 22.5 acres bordered by 14th Street on the north, Magnolia Avenue on the east, Tequesquite Avenue and the Calvary Presbyterian Church on the south, and Brockton Avenue on the west. The hospital campus is comprised of a number of buildings of varying ages and condition. The campus currently has a bed count of 373 beds. A copy of the existing site plan is provided on **Figure 2.** Access to the hospital campus is provided via a number of driveways located on each of the perimeter streets. The main access is currently located on Magnolia Avenue across from 15th Street.

A 1,060-space parking structure is currently under construction (shown as Building O on the Existing Site Plan) at the northeast corner of the intersection of Tequesquite Avenue and Brockton Avenue. When the parking structure is complete, a portion of hospital traffic, especially employee traffic, will shift to the Tequesquite Avenue entrance. This redistribution of site traffic is discussed in a later section of this report.

A new medical office building (MOB) is also under construction (shown as Building P on the Existing Site Plan). When this MOB (Building P) is complete, physicians who have offices in the existing MOB (shown as Building N on the Existing Site Plan) will either move to the new MOB, or will move off the RCH campus. A summary of existing site uses and near-term approved site uses with the completion of the parking structure and MOB Building P is provided on **Table 1**.

Proposed Project

Riverside Community Hospital is proposing a new Specific Plan for its campus, which will include a short-term and long-term building plan for the campus. The project will be evaluated in two phases.

Phase I will consist of a new seven-story hospital bed tower on the site of the existing MOB Building N (to be demolished). The new bed tower will house up to 189 new beds, bringing the total bed count for the campus to 562 beds. Acute care services, currently located in Building A, would be relocated to the new bed tower. Opening Year for Phase I is anticipated to be Year 2014. A copy of the Phase I site plan is provided on **Figure 3**. A summary of the site uses and quantities to be added and to be removed as part of Phase I is provided on **Table 2**.

FIGURE 1
VICINITY MAP

NOT TO SCALE

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Kimley-Horn and Associates, Inc.

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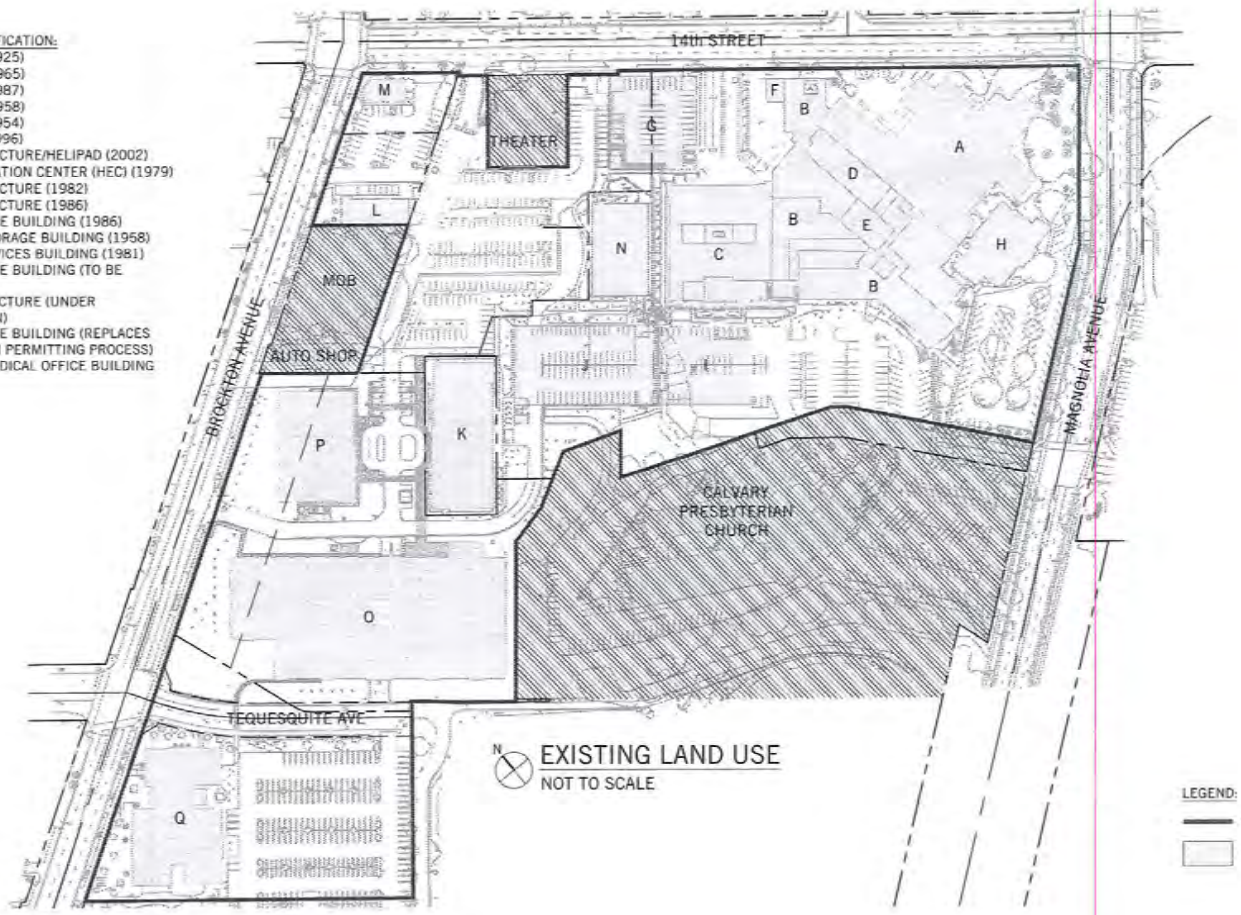
BUILDING IDENTIFICATION:
A. BUILDING A (1925)
B. BUILDING B (1965)
C. BUILDING C (1987)
D. BUILDING D (1958)
E. BUILDING E (1954)
F. BUILDING F (1996)
G. PARKING STRUCTURE/HELIPAD (2002)
H. HEALTH EDUCATION CENTER (HEC) (1979)
I. PARKING STRUCTURE (1982)
J. PARKING STRUCTURE (1986)
K. MEDICAL OFFICE BUILDING (1986)
L. BROCKTON STORAGE BUILDING (1958)
M. WOMEN'S SERVICES BUILDING (1981)
N. MEDICAL OFFICE BUILDING (TO BE DEMOLISHED)
O. PARKING STRUCTURE (UNDER CONSTRUCTION)
P. MEDICAL OFFICE BUILDING (REPLACES BUILDING N, IN PERMITTING PROCESS)
Q. RAINCROSS MEDICAL OFFICE BUILDING (1996)



EXISTING LAND USE
NOT TO SCALE

LEGEND:
SITE PLAN BOUNDARY
EXISTING BUILDINGS

NOT TO SCALE

FIGURE 2
EXISTING SITE PLAN

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TABLE 1
RIVERSIDE COMMUNITY HOSPITAL
SUMMARY OF CURRENT AND APPROVED SITE USES

Current RCH Uses on the Site (Existing Conditions)

Building / Use	Bldg.	Sq. Ft.	Beds	Notes
Hospital - Lab, Dietary, Administration	A	58,705		Hospital Support
Hospital	B	176,040	273	
Hospital - ICU and Medical Surgical	C	111,450	34	
Hospital	D	41,431	66	
Hospital	E	3,565	--	
Hospital	F	1,077	--	
Parking Structure	G	59,500	--	
Health Education Centre (HEC)	H	12,543	--	Meeting Rooms
Parking Structure	I	96,084	--	
Parking Structure	J	101,049	--	
Cancer Center - MOB 2	K	65,503	--	
4420 Brockton Avenue	L	4,450	--	Storage Building
Womens Services (4410 Brockton)	M	1,900	--	Community Outreach, Lactation Bldg
Medical Office Building 1	N	61,135	--	
Raincross MOB	Q	57,754	--	
Total		***852,186***	***373***	

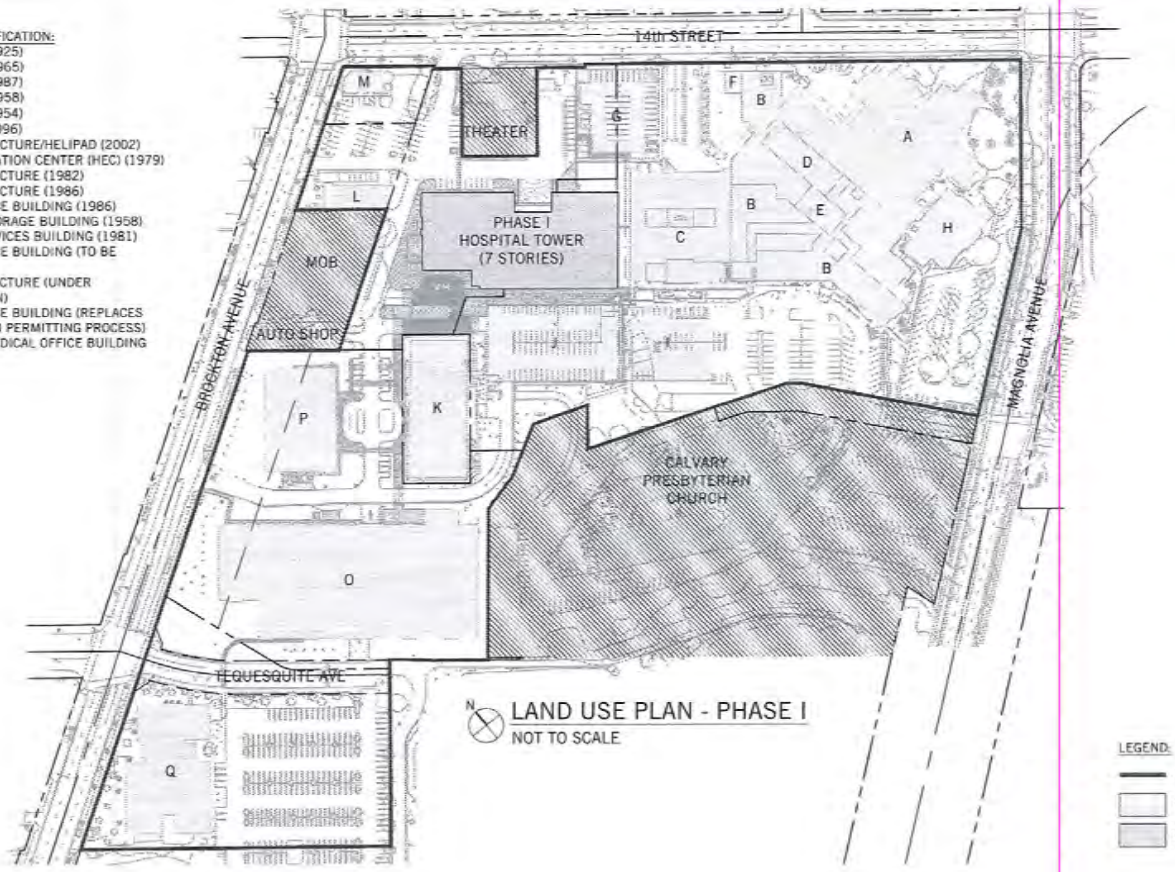
Current Plus Approved RCH Uses (Pre-EIR Baseline) [1]

Building / Use	Bldg.	Sq. Ft.	Beds	Notes
Hospital - Lab, Dietary, Administration	A	58,705		Hospital Support
Hospital	B	176,040	273	
Hospital - ICU and Med Surge	C	111,450	34	
Hospital	D	41,431	66	
Hospital	E	3,565	--	
Hospital	F	1,077	--	
Parking Structure	G	59,500	--	
Health Education Centre (HEC)	H	12,543	--	Meeting Rooms
Parking Structure	I	96,084	--	
Parking Structure	J	101,049	--	
Cancer Center - MOB 2	K	65,503	--	
4420 Brockton Avenue	L	4,450	--	Storage Building
Womens Services (4410 Brockton)	M	1,900	--	Community Outreach, Lactation Bldg
* Medical Office Building 1	N	61,135	--	To be vacated
Raincross MOB	Q	57,754	--	
* Parking Structure	O	385,500	--	Under construction
* 4510 Brockton Ave - Approved MOB	P	61,000	--	Under construction
Total		***1,298,686***	***373***	

* - Represents change from previous phase / condition

[1] For purposes of this study, the current uses on the RCH site, plus the approved parking structure and MOB represent the the Pre-EIR Baseline. The parking structure and MOB were under construction at the time this traffic study was undertaken.

BUILDING IDENTIFICATION:
A. BUILDING A (1925)
B. BUILDING B (1965)
C. BUILDING C (1987)
D. BUILDING D (1958)
E. BUILDING E (1954)
F. BUILDING F (1996)
G. PARKING STRUCTURE/HELIPAD (2002)
H. HEALTH EDUCATION CENTER (HEC) (1979)
I. PARKING STRUCTURE (1982)
J. PARKING STRUCTURE (1986)
K. MEDICAL OFFICE BUILDING (1986)
L. BROCKTON STORAGE BUILDING (1958)
M. WOMEN'S SERVICES BUILDING (1981)
N. MEDICAL OFFICE BUILDING (TO BE DEMOLISHED)
O. PARKING STRUCTURE (UNDER CONSTRUCTION)
P. MEDICAL OFFICE BUILDING (REPLACES BUILDING N, IN PERMITTING PROCESS)
Q. RAINCROSS MEDICAL OFFICE BUILDING (1996)



N LAND USE PLAN - PHASE I
NOT TO SCALE

LEGEND:
SITE PLAN BOUNDARY
EXISTING BUILDINGS
PROPOSED BUILDING

NOT TO SCALE

FIGURE 3
PHASE I SITE PLAN

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TABLE 2
RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT
SUMMARY OF PHASE I SITE USES

Building / Use	Bldg.	Sq. Ft.	Beds	Notes
* Hospital - Building Re-use	A	58,705		Dietary and Lab uses will move to Phase I Bed Tower Re-use Building as Hospital Admin Support
Hospital	B	176,040	273	
Hospital - ICU and Med Surge	C	111,450	34	
Hospital	D	41,431	66	
Hospital	E	3,565	--	
Hospital	F	1,077	--	
Parking Structure	G	59,500	--	
Health Education Centre (HEC)	H	12,543	--	Meeting Rooms
Parking Structure	I	96,084	--	
Parking Structure	J	101,049	--	
Cancer Center - MOB 2	K	65,503	--	
4420 Brockton Avenue	L	4,450	--	Storage Building
Womens Services (4410 Brockton)	M	1,900	--	Community Outreach, Lactation Bldg
* Medical Office Building 1	N	0	--	To be demolished
Raincross MOB	Q	57,754	--	
Parking Structure	O	385,500	--	1,060 spaces
4510 Brockton Ave	P	61,000	--	
* New Phase I Hospital Bed Tower		251,500	189	New Construction
Total		***1,489,051***	***562***	

* - Represents change from previous phase / condition

Phase II would consist of demolition of some existing facilities, and development of new facilities, to be completed over the next 30 years. Phase II would be divided into three sub-phases: Phase IIa, Phase IIb, and Phase IIc, as outlined below:

- **Phase IIa** would consist of the demolition of Building A, which would be replaced with a 100,000-square-foot mixed-use building. Upon completion of Phase IIa, the hospital campus will provide a total of 562 beds.

- **Phase IIb** would consist of the construction of an 8-story, 600,000-square-foot bed tower and the relocation of beds from Building B and Building D to the new tower. The total hospital bed capacity would remain at 562. The existing parking structure will be demolished during Phase IIb.

- **Phase IIc** includes the increase in campus bed capacity to a maximum of 600 beds. This phase also includes the re-use of Buildings B and D to provide medical clinics, and ancillary services to foster hospital growth.

A copy of the Phase II site plan is provided on **Figure 4**. A summary of the site uses and the quantities to be added and to be removed as part of Phase II is provided on **Table 3**.

PROJECT IMPACT ANALYSIS

Analysis Scenarios

The following study scenarios were analyzed for this project:

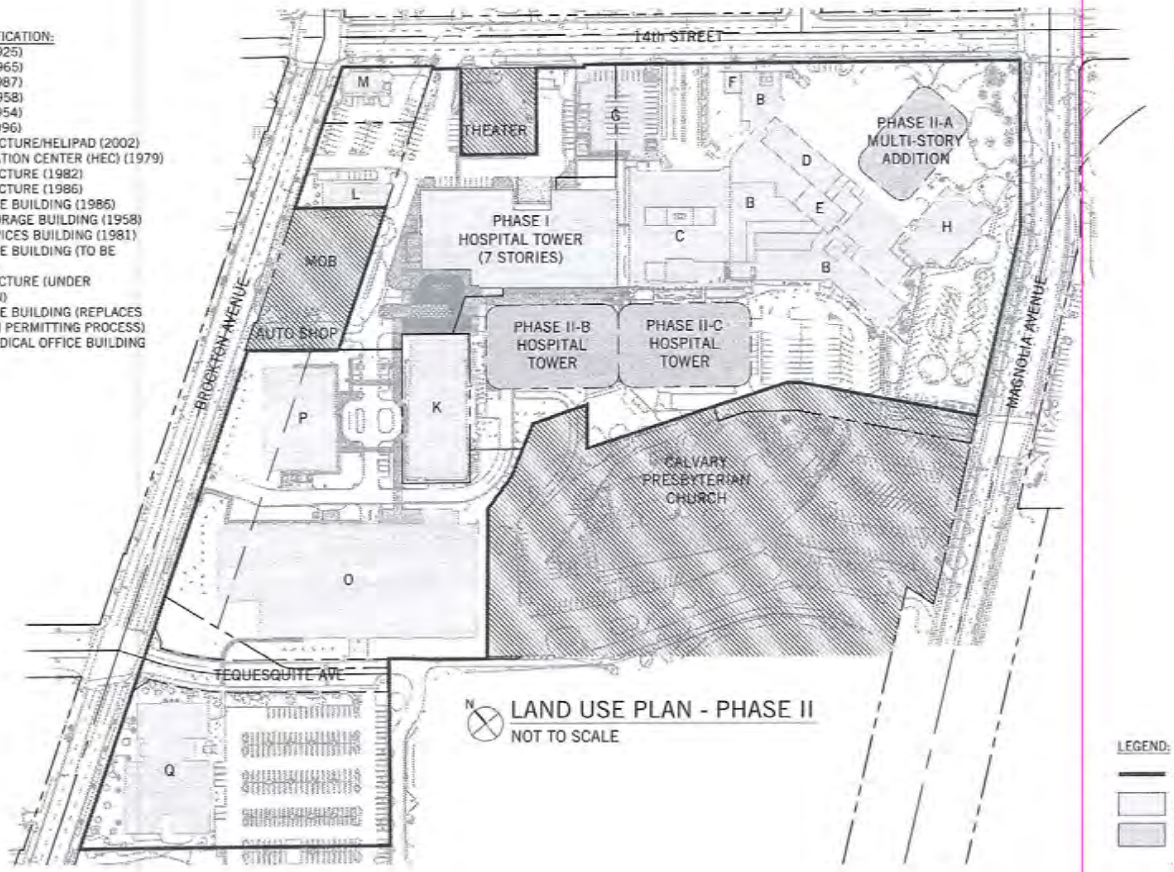
- Existing Conditions
- Existing Plus Project
- Pre-EIR Baseline Redistribution Conditions (Current plus Approved RCH uses) [1]
- Pre-EIR Baseline Plus Phase I Project
- Opening Year 2014 with Growth and Cumulative Projects
  - Without Project
  - With Phase I Project
- Build-out
  - Without Project
  - With Phase II Project

A discussion of each scenario and the results of the analysis are provided in the following sections.

In addition to the analysis of the project's traffic-related impacts, a Special Issues section will cover peak hour operating conditions at the study intersections along Brockton Avenue, assuming implementation of the proposed Brockton Avenue Restriping project. This project, proposed by the City of Riverside, would consist of restriping Brockton Avenue to provide one travel lane and bicycle and parking lanes in each direction, with a center two-way left-turn lane. A discussion of the proposed restriping project and the resulting operating conditions is provided in the Special Issues section of this report.

[1] For purposes of this study, the current uses on the RCH site, plus the approved MOB and parking structure, along with the redistribution of Hospital traffic that will occur when the parking structure is complete, represent the Pre-EIR Baseline. The parking structure and MOB were under construction at the time this study was undertaken.

BUILDING IDENTIFICATION:
A. BUILDING A (1925)
B. BUILDING B (1965)
C. BUILDING C (1987)
D. BUILDING D (1958)
E. BUILDING E (1954)
F. BUILDING F (1996)
G. PARKING STRUCTURE/HELIPAD (2002)
H. HEALTH EDUCATION CENTER (HEC) (1979)
I. PARKING STRUCTURE (1982)
J. PARKING STRUCTURE (1986)
K. MEDICAL OFFICE BUILDING (1986)
L. BROCKTON STORAGE BUILDING (1958)
M. WOMEN'S SERVICES BUILDING (1981)
N. MEDICAL OFFICE BUILDING (TO BE DEMOLISHED)
O. PARKING STRUCTURE (UNDER CONSTRUCTION)
P. MEDICAL OFFICE BUILDING (REPLACES BUILDING N, IN PERMITTING PROCESS)
Q. RAINCROSS MEDICAL OFFICE BUILDING (1996)



LEGEND:
- SITE PLAN BOUNDARY
- EXISTING BUILDINGS
- PROPOSED BUILDING ZONE

NOT TO SCALE

FIGURE 4
PHASE II SITE PLAN

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TABLE 3
RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT
SUMMARY OF PHASE II SITE USES

Building / Use	Bldg.	Phase II Sub-Phase	Sq. Ft.	Beds	Notes
* Hospital - Building Re-use	A	IIa	--	--	To be demolished
* New MOB		IIa	100,000	--	New Construction
* Hospital Re-use	B	IIb	176,040	--	Bldg B beds (273) to move to new Phase II Bed Tower. Building to be re-used as Outpatient, Skilled Nursing, Education (UCR Program Space)
Hospital - ICU and Med Surge	C	n/c	111,450	34	
* Hospital Re-use	D	IIb	41,431	--	Bldg D beds (66) to move to new Phase II Bed Tower. 29,943 SF to remain as Hospital Support. Balance to be re-used as Outpatient, Skilled Nursing, Education (UCR Program Space)
Hospital	E	n/c	3,565	--	
Hospital	F	n/c	1,077	--	
Parking Structure	G	n/c	59,500	--	
Health Education Centre (HEC)	H	n/c	12,543	--	Meeting Rooms
* Parking Structure	I	IIb	--	--	To be demolished
* Parking Structure	J	IIb	--	--	To be demolished
Cancer Center - MOB 2	K	n/c	65,503	--	
4420 Brockton Avenue	L	n/c	4,450	--	Storage Building
Womens Services (4410 Brockton)	M	n/c	1,900	--	Community Outreach, Lactation Bldg
Raincross MOB	Q	n/c	57,754	--	
Parking Structure	O	n/c	385,500	--	
4510 Brockton Ave MOB	P	n/c	61,000	--	
Phase I Hospital Bed Tower		n/c	251,500	189	
* New Phase II Hospital Bed Tower		IIb / IIc	600,000	377	New Construction
Total			***1,933,213***	***600***	

* - Represents change from previous phase / condition
n/c = no change in Phase II

Analysis Methodology

The following section describes the methodology used in the process of determining study area, forecasting future traffic volumes, and analyzing project impacts.

Study Intersections and Roadway Segments

The study area was determined in accordance with the City of Riverside *Traffic Impact Analysis Preparation Guide*, August 2012, which includes the preparation of a *Scoping Agreement for a Traffic Impact Study*. A copy of the approved Scoping Agreement is provided in ***Appendix A***. The following study intersections and roadway segments were identified for evaluation.

Int. #	Study Intersection	Traffic Control	Traffic Count Source and Date *
1	Brockton Avenue and University Avenue	Signalized	New Count - 2013
2	Market Street and University Avenue	Signalized	City Files - 2011
3	14th Street and Brockton Avenue	Signalized	New Count - 2013
4	14th Street and RCH Entrance	Unsignalized	New Count - 2013
5	14th Street and Magnolia Avenue / Market Street	Signalized	City Files – 2012
6	14th Street and Lime Street	Signalized	City Files – 2012
7	14th Street and Mulberry Street / SR-91 WB Ramps	Signalized	City Files – 2012
8	14th Street and SR-91 EB Ramps	Signalized	City Files – 2012
9	Brockton Avenue and RCH Entrance	Unsignalized	New Count - 2013
10	Magnolia Avenue and 15th Street / RCH Entrance	Signalized	New Count - 2013
11	Brockton Avenue and Tequesquite Avenue	Signalized	New Count - 2013
12	Brockton Avenue and Terracina Drive	Signalized	New Count - 2013
13	Magnolia Avenue and Terracina Drive	Signalized	City Files – 2012
14	Brockton Avenue and Ramona Drive	Signalized	New Count - 2013
15	Magnolia Avenue and Ramona Drive	Signalized	City Files – 2012

* As indicated above, and as discussed on page 17, available count data was provided by the City for locations impacted by ongoing construction. New count data was collected at all other non-impacted locations.

Segment #	Roadway Segment	Traffic Count Source and Date *
1	14th Street: West of Brockton Avenue	New Count - 2013
2	14th Street: Brockton Avenue to Magnolia Avenue	New Count – 2013
3	14th Street: Magnolia Avenue to Mulberry Avenue	City Files - 2011
4	Brockton Avenue: University Avenue to 14th Street	New Count - 2013
5	Brockton Avenue: 14th Street to Tequesquite Avenue	New Count - 2013
6	Brockton Avenue: Tequesquite Avenue to Ramona Drive	City Files – 2012
7	Market Street: University Avenue to 14th Street	New Count - 2013
8	Magnolia Avenue: 14th Street to 15th Street	New Count - 2013
9	Magnolia Avenue: 15th Street to Ramona Drive	New Count - 2013

* As indicated above, and as discussed on page 17, available count data was provided by the City for locations impacted by ongoing construction. New count data was collected at all other non-impacted locations.

The location of the study intersections and roadway segments are shown on **Figure 5**. With the exception of the Hospital entrances on 14th Street and on Brockton Avenue, all study intersections are signalized.

Analysis Process

The analysis process includes determining the operating conditions at the study intersections for the morning and evening peak hours using peak hour intersection turning movement volumes, and operations on roadway segments using average daily traffic (ADT) volumes.

Analysis Software

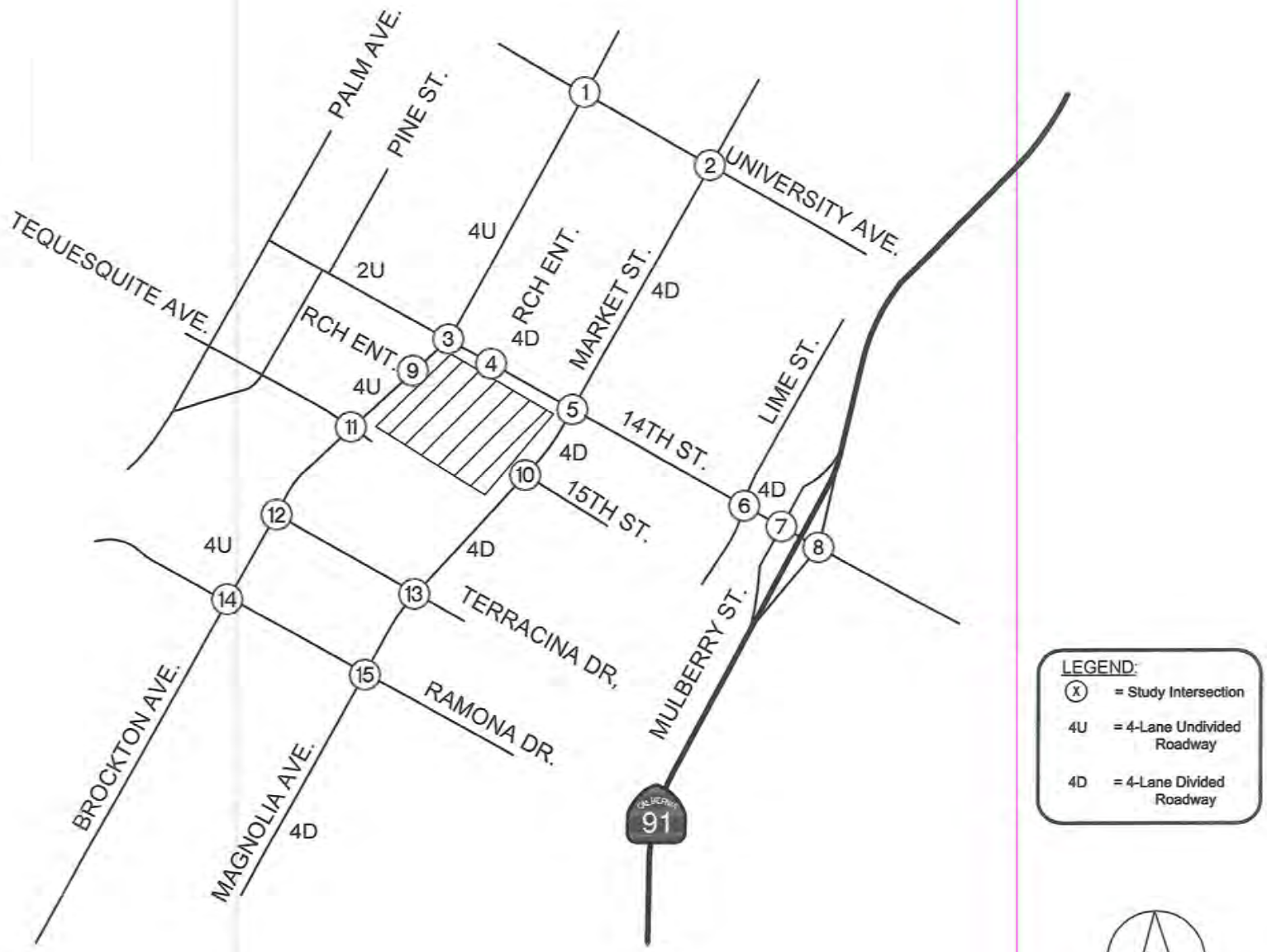
The Synchro 8 software (Trafficware) was used to analyze the peak hour operations of both signalized and unsignalized intersections. Synchro 8 uses the methodologies outlined in the 2010 *Highway Capacity Manual (HCM)*.

Signalized Intersections

The 2010 *Highway Capacity Manual (HCM),* published by the Transportation Research Board (TRB), establishes a system whereby highway facilities are rated for their ability to process traffic volumes. The terminology "Level of Service" is used to provide a qualitative evaluation based on certain quantitative calculations, which are related to empirical values.

Level of Service (LOS) for signalized intersections is defined in terms of average vehicle delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in additional to the stop delay. The Level of Service criteria for the various LOS designations are summarized on the following chart.

LEVEL OF SERVICE (LOS) CRITERIA FOR SIGNALIZED INTERSECTIONS		
LOS	**Control Delay (sec/veh)**	**Description**
A	≤10.0	Operations with very low delay and most vehicles do not stop.
B	>10.0 - 20.0	Operations with good progression but with some restricted movement.
C	>20.0 - 35.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35.0 - 55.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55.0 - 80.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80.0	Operations are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.
Source: 2010 Highway Capacity Manual, Chapter 18, Page 18-6, Exhibit 18-4		



LEGEND:

(x) = Study Intersection

4U = 4-Lane Undivided Roadway

4D = 4-Lane Divided Roadway

NOT TO SCALE

FIGURE 5
STUDY INTERSECTIONS AND ROADWAY SEGMENTS

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Unsignalized Intersections

The Level of Service for unsignalized intersections is determined by the computed or measured control delay and is defined for each minor movement. The Level of Service criteria for unsignalized intersections, as described in the 2010 *Highway Capacity Manual*, are provided in the following chart.

LEVEL OF SERVICE (LOS) CRITERIA FOR UNSIGNALIZED INTERSECTIONS		
LOS by Volume-to-Capacity Ratio		
v/c ≤ 1.0	**v/c > 1.0**	**Control Delay (sec/veh)**
A	F	0 - 10.0
B	F	>10.0 - 15.0
C	F	>15.0 - 25.0
D	F	>25.0 - 35.0
E	F	>35.0 - 50.0
F	F	>50.0

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches, or for the intersection as a whole.
Source: 2010 Highway Capacity Manual, Chapter 19, Page 19-2, Exhibit 19-1

Level of Service Standard

The Level of Service standards for the City of Riverside are as follows:

"City of Riverside allows Level of Service (LOS) D to be used as the maximum acceptable threshold for the study intersections and roadways of Collector or higher classification. LOS C is to be maintained on all street intersections."

Per Council Policy CCM-2.3, it is the City policy to "Maintain LOS D or better on Arterial Streets wherever possible. These standards may also be applied to local and collector street study locations that provide local access to the project site, at the direction of City staff. At key locations, such as City Arterials that are used by regional freeway bypass traffic and at heavily traveled freeway interchanges, allow LOS E at peak hours as the acceptable standard on a case-by-case basis.

A significant impact at a study intersection will occur when the addition of project-related trips causes either peak hour Level of Service to degrade from acceptable (LOS A through D) to unacceptable levels (LOS E or F), or the peak hour delay to increase as follows:

Level of Service	Increase in Delay (seconds)
LOS A / B	10.0 seconds
LOS C	8.0 seconds
LOS D	5.0 seconds
LOS E	2.0 seconds
LOS F	1.0 second

Roadway Segments

In order to determine the project-related impacts on the study area roadway segments, the following roadway capacities are used.

City of Riverside Roadway Capacity [1]				
Roadway Classification	Number of Lanes	Two-Way Traffic Volumes (ADT) [2]		
		Service Level C	Service Level D	Service Level E
Local	2	2,500 – 2,799	2,800 – 3,099	3,100 +
Collector (66' or 80')	2	9,900 – 11,199	11,200 – 12,499	12,500 +
Arterial [3]	2	14,400 – 16,199	16,200 – 17,999	18,000 +
Arterial (88')	4	16,800 – 19,399	19,400 – 21,199	22,000 +
Arterial (100')	4	26,200 – 29,599	29,600 – 32,999	33,000 +
Arterial (120')	6	38,700 – 44,099	44,100 – 49,499	49,500 +
Arterial (144')	8	50,600 – 57,799	57,800 – 64,999	65,000 +

Notes: [1] All capacity figures are based on optimum conditions and are intended as guidelines for planning purposes only.
[2] Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables.
[3] Two-lane roadways designed as future arterials that conform to arterial design standards for vertical and horizontal alignments are analyzed as arterials.

Source: City of Riverside Public Works Department – Traffic Impact Analysis Preparation Guide (August, 2012) – Exhibit D

EXISTING TRAFFIC CONDITIONS

This section summarizes the existing roadway circulation network, daily and peak-hour traffic volumes, and existing operating conditions and Level of Service at the study intersections and roadway segments.

Existing Street System

The following provides a description of the existing street system in the vicinity of the project site.

Brockton Avenue is a north-south 4-lane undivided roadway with two travel lanes in each direction. Brockton Avenue has a right-of-way width of 88 feet with curb, gutter, and sidewalk on both sides of the road. The posted speed limit is 40 MPH. Brockton Avenue will serve as the main access for the Hospital parking structure, currently under construction. On the City of Riverside Master Plan of Roadways, Brockton Avenue is designated as an 88-foot Arterial (four lanes). A proposed restriping project on Brockton Avenue will be addressed later in this report.

Magnolia Avenue / Market Street is a north-south 4-lane divided roadway with two travel lanes in each direction, and a two-way-center-left-turn lane. The roadway is named Magnolia Avenue south of 14th Street, and Market Street north of 14th Street. Magnolia Avenue / Market Street has a right-of-way width of 120 feet with curb, gutter, and sidewalk on both sides of the road. The posted speed limit is 40 MPH. On the City of Riverside Master Plan of Roadways, Magnolia Avenue / Market Street is designated as a 120-foot Arterial (six lanes).

University Avenue is an east-west 4-lane divided roadway with two travel lanes in each direction, and a two-way-left-turn-lane divider. The posted speed limit is 40 MPH.

14th Street is an east-west 4-lane divided roadway with two travel lanes in each direction, and a two-way-center-left-turn lane. The street has a right-of-way width of 88 feet with curb, gutter, and sidewalk on both sides of the road. The posted speed limit is 35 MPH, with the exception of the 25 MPH school zone when children are present. To the west of Brockton Avenue, 14th Street narrows to a two-lane collector. To the east of the project site, 14th Street provides access to the SR-91 Freeway. The SR-91 HOV Project is currently under construction, which currently affects traffic flows on 14th Street. On the City of Riverside Master Plan of Roadways, 14th Street is designated as a 100-foot Arterial (four lanes).

15th Street is a 2-lane east-west undivided roadway with one travel lane in each direction. The road terminates at the eastern hospital entrance. The eastern end of the roadway extends into residential development and also provides access to the Riverside City College campus. There is no posted speed limit. 15th Street is not depicted on the Master Plan of Roadways.

Tequesquite Avenue is an east-west 2-lane divided roadway that provides access to the southern portion of the Hospital. This entrance to the hospital is currently closed due to the construction of the parking structure discussed in the Project Description. The road terminates east of Brockton Avenue. There is no posted speed limit. Tequesquite Avenue is not depicted on the Master Plan of Roadways.

Terracina Drive is an east-west 2-lane undivided roadway with one travel in each direction. There is no posted speed limit. Terracina Drive terminates in a T-intersection at Brockton Avenue, and continues easterly past Magnolia Avenue to provide access to Riverside City College. Terracina Drive is not depicted on the Master Plan of Roadways.
Ramona Drive is an east-west 3-lane undivided roadway with one eastbound and two westbound lanes. There is no posted speed limit. On the City of Riverside Master Plan of Roadways, Ramona Drive is designated as an 88-foot Arterial (four lanes).

Transit Service

Transit service to the project area is provided by the Riverside Transit Agency (RTA). The following is a brief description of the bus routes that provide transit service on the street system surrounding the Riverside Community Hospital campus.

Route 1 operates between the University of California at Riverside (UCR) in the City of Riverside and the West Corona Metrolink Station in the City of Corona. The route provides access to the Riverside Community Hospital via Magnolia Avenue. Route 15 operates on weekdays from 4:00 AM to 10:30 PM with 30-minute headways (headway is the time between bus arrivals) and on the weekends from 5:30 AM to 9:30 PM with 30-minute headways.

Route 13 operates in the City of Riverside via Magnolia Avenue in a northeast-southwest direction. Route 13 provides service on weekdays from 4:30 AM to 8:30 PM with 45-minute headways and on the weekends from 7:00 AM to 6:30 PM with 60-minute headways.

Route 14 operates between the City of Riverside and the City of Loma Linda. Route 14 provides service to the cities of Riverside, Grand Terrace, Loma Linda, and Colton. Route 14 operates on weekdays from 5:15 AM to 8:40 PM with 90-minute headways and on the weekends from 7:00 AM to 7:45 PM with 90-minute headways.

Route 15 operates between the City of Riverside and the La Sierra area of the City. Route 15 starts at the Riverside Downtown Terminal and ends at the intersection of Pierce and Sterling. The route provides access to the Riverside Community Hospital via Magnolia Avenue. Route 15 operates on weekdays from 5:40 AM to 9:40 PM with 45-minute headways and on the weekends from 7:00 AM to 7:45 PM with 60-minute headways.

Route 50 is known as the "Jury Trolley" and operates between the Riverside County Courthouse and the intersection of Magnolia Avenue and Terracina Drive. This route provides access to the Riverside Community Hospital via Magnolia Avenue. Route 50 operates Monday through Thursday only, from 7:20 to 9:00 AM with 13-minute headways, and from 9:01 AM to 5:40 PM with 27-minute headways.

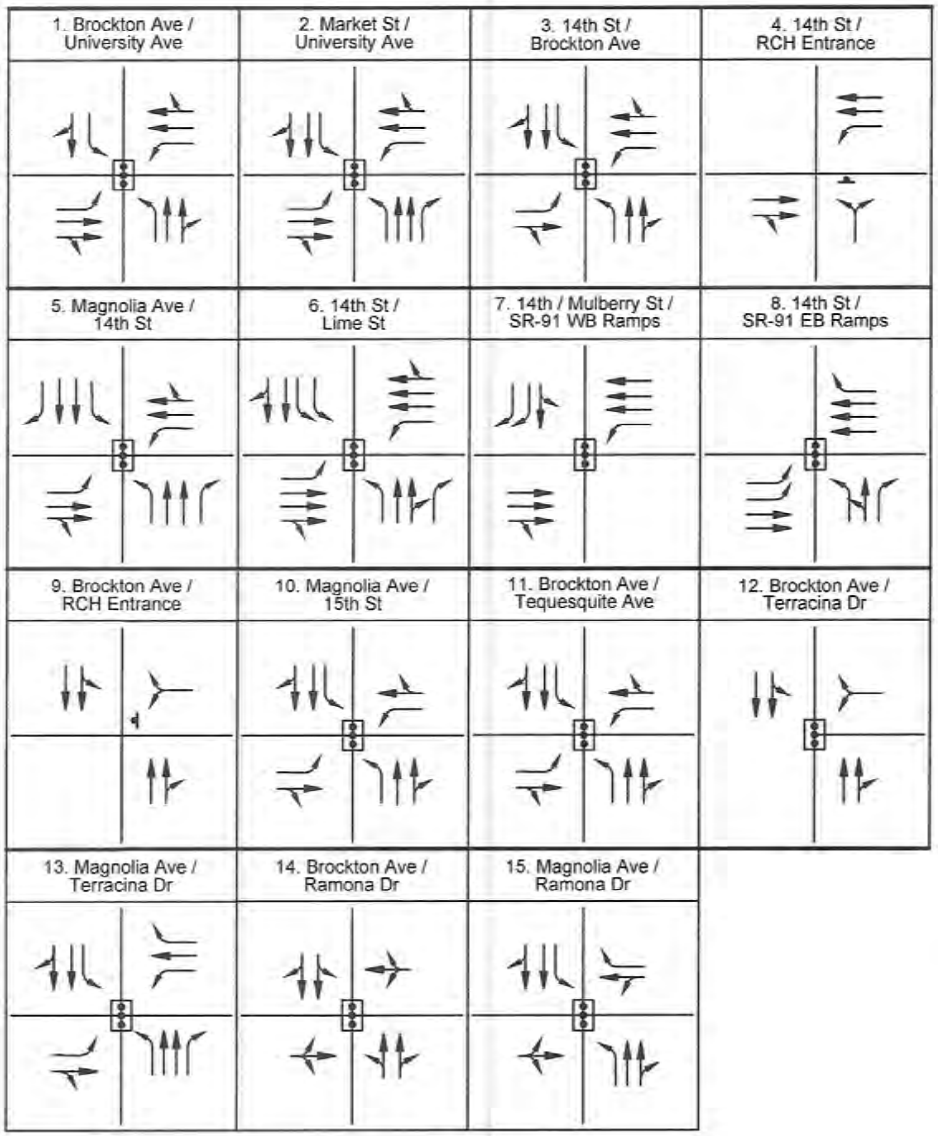
A bus turnout serving southbound bus traffic on Magnolia Street is located on the west side of the street, south of 14th Street, immediately north of the entrance to the hospital's Physician Parking Lot. The proximity of the bus pull-out to the parking lot entrance sometimes results in turning movement conflicts between buses and cars – buses sometimes pull out of the bus turnout at the same time an individual is pulling into the parking lot, resulting in a close "weave" interaction between buses and cars.

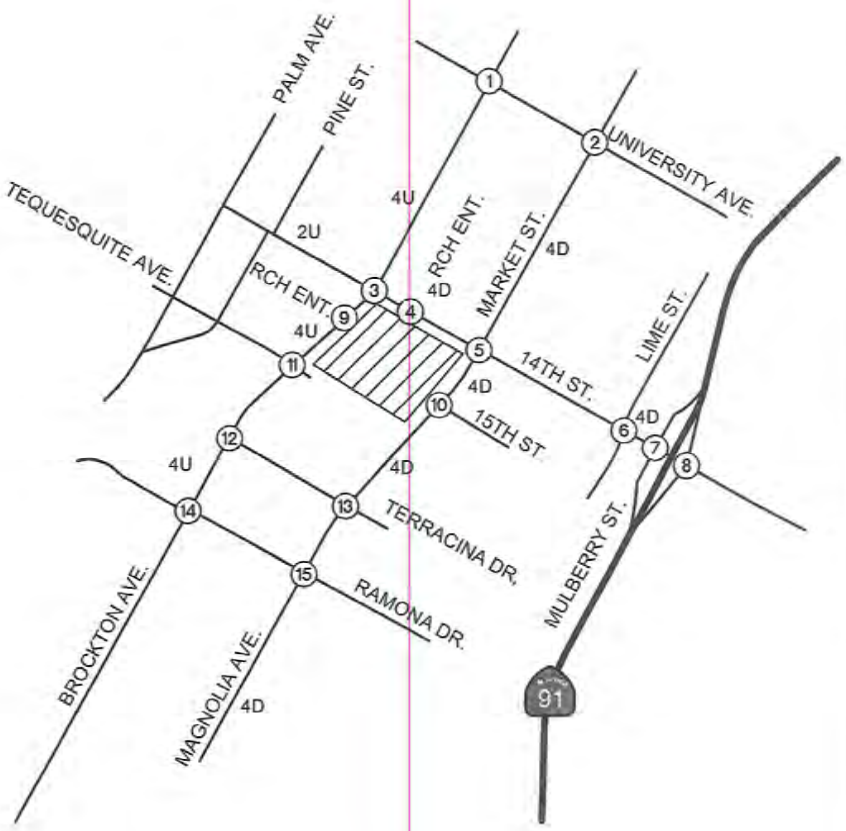
When Building A (at the northeast corner of the RCH campus) is replaced with new campus facilities in Phase IIa, the layout, parking, and access for this portion of the campus will be re-designed, and the potential conflicts between buses and vehicles entering the Hospital entrance will be resolved. In the interim, the Hospital will work with RTA and City staff to identify minor modifications to reduce the potential for conflicts. A diagram of the existing bus turn-out and RCH driveway layout, and a diagram of a potential interim solution are provided in ***Appendix B***.

Existing Traffic Volumes

Existing morning peak period (7:00 to 9:00 AM) and evening peak period (4:00 to 6:00 PM) turning movement counts were obtained for all study intersections, and 24-hour roadway volumes were obtained for all study roadway segments. For locations affected by the on-going freeway construction and the construction currently taking place on the RCH campus, prior traffic counts were obtained. In accordance with direction from City Traffic Engineering staff, a growth factor of 1.5% per year was applied to any traffic count more than one year old, to "grow" the traffic volumes to 2013 levels. New traffic counts at unaffected locations were collected in May, 2013. At the time of these counts, the parking structure (Building O) and the MOB (Building P) were approved projects for the RCH campus, but were not yet completed. The source and date of the traffic counts are shown on the charts on page 10.

The existing lane configurations at the study intersections and the existing number of travel lanes on the roadways segments are shown on **Figure 6**. Existing peak hour turning movement volumes at the study intersections are shown on **Figure 7.** Existing ADT roadway segment volumes are shown on **Figure 8.** Peak hour intersection traffic count and daily roadway traffic count worksheets are provided in ***Appendix C***.





LEGEND:
- (X) = Study Intersection
- = Signal
- = Stop Sign

NOT TO SCALE

FIGURE 6
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

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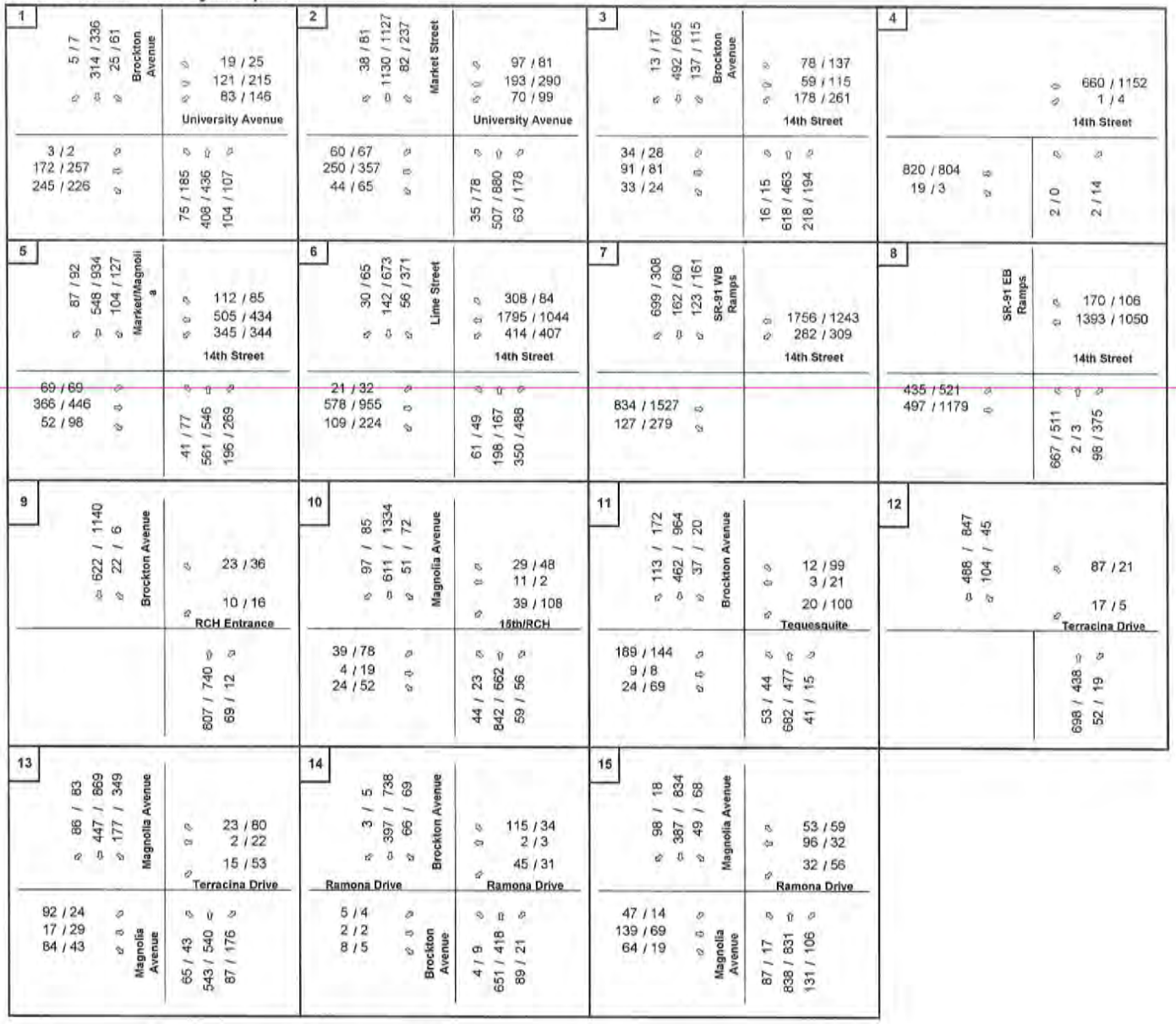

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Figure 7

Existing Peak-Hour Traffic Volumes

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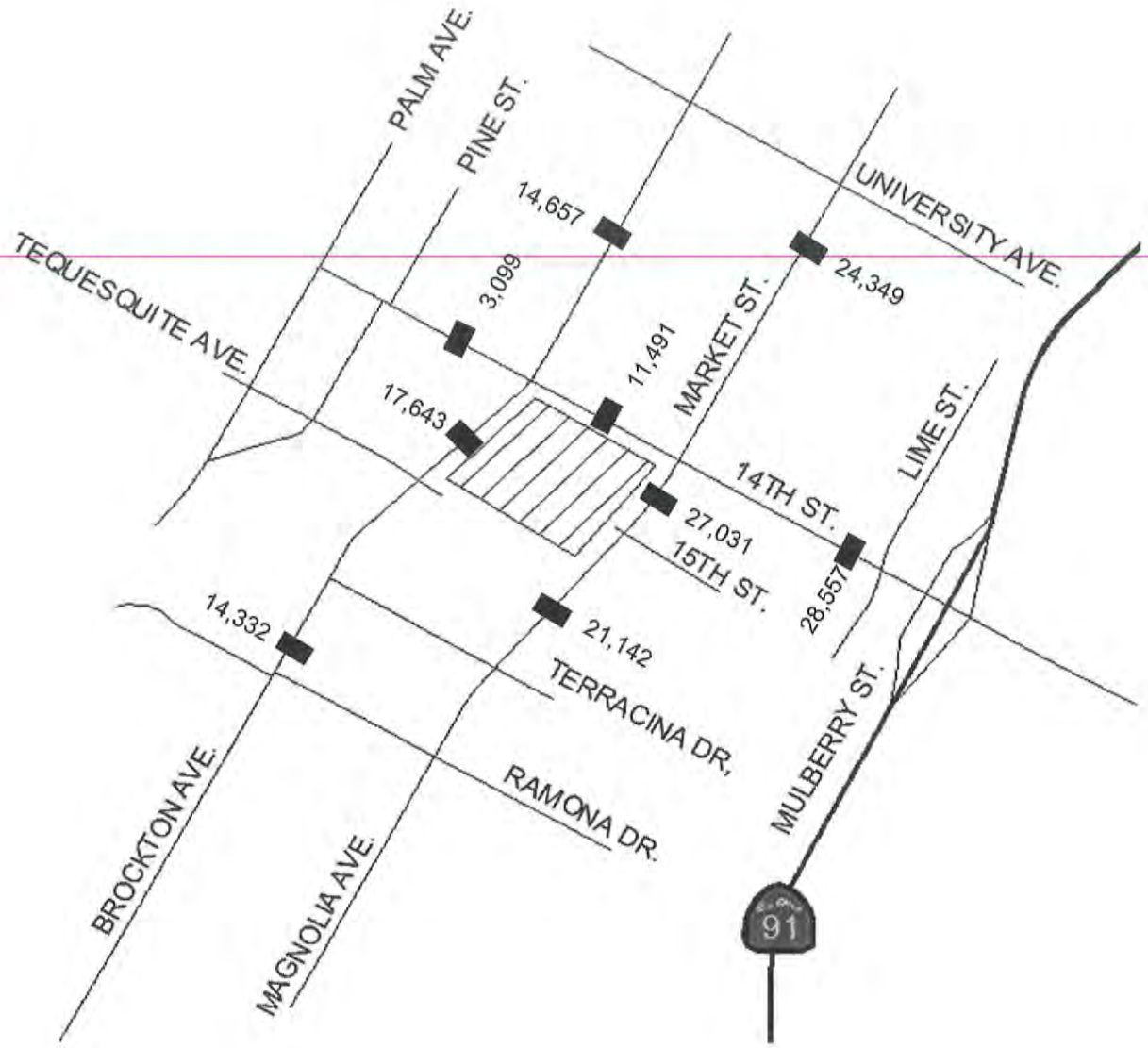

Legend

■ X,XXX = Average Daily Traffic

NOT TO SCALE

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Figure 8

Existing ADT Volumes

Intersection Analysis – Existing Conditions [2]

The study intersections were analyzed in accordance with the analysis methodology described earlier in this report. Intersection Level of Service worksheets are provided in ***Appendix D***. The Existing Conditions analysis results and Level of Service for the study intersections are presented in **Table 4**.

Review of this table shows that all study intersections currently operate at LOS D or better during both peak periods, with the exception of the following:

- 9. Brockton Avenue and the RCH Entrance: PM Peak – LOS E

The intersection of Brockton Avenue and the RCH entrance is unsignalized, with stop control on the outbound (westbound) driveway approach from the Hospital. The delay value and Level of Service for an unsignalized intersection are based on the worst single approach to the intersection, and does not represent the total delay for the overall intersection. Therefore, the LOS E delay for this intersection represents the delay for vehicles exiting the Hospital during the evening peak hour. These vehicles experience delay waiting for an appropriate gap in traffic on Brockton Avenue. In a later section of this report, a signal warrant analysis will be conducted for any unsignalized intersection operating at a deficient Level of Service.

Roadway Segment Analysis – Existing Conditions [2]

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. The Existing Conditions analysis results and Level of Service for the study roadway segments are presented in **Table 5**. As review of this table shows, all study roadway segments are currently operating at LOS C or better under Existing Conditions.

PROJECT TRAFFIC

Trip Generation

The trips expected to be generated by the Riverside Community Hospital Expansion project were calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition (2012). Trip rates are based on ITE Land Use Category 610 – Hospital. Daily, morning peak hour, and evening peak hour trip generation estimates for Phase I of the project are summarized on **Table 6**. Phase I assumes the construction of a new bed tower with 189 beds, to bring the total bed count on the RCH campus to 562 beds.

Trip generation estimates for Phase II are summarized on **Table 7**. A breakdown of project trip generation for each sub-phase for Phase II is provided along with the Scoping Agreement in Appendix A. Phase II assumes a total bed count of 600 beds, and the addition of a 100,000-square-foot MOB. Buildings B and D will be re-purposed as one or more medical campus functions, such as Hospital Administrative Support for the Bed Towers, Skilled Nursing, UCR Resident facilities, or Outpatient facilities. The ITE trip generation rates for the individual uses in Table 7 are based on stand-alone uses not located in a medical campus environment.

[2] Existing Conditions represent actual conditions at the time the traffic study was undertaken. At that time, the parking structure and MOB were approved and under construction, but not yet complete. The Existing Plus Approved RCH Uses scenario represents the pre-EIR Baseline, as discussed in the next section of the report.

TABLE 4

SUMMARY OF INTERSECTION OPERATIONS - EXISTING CONDITIONS [c]

INTERSECTION		TRAFFIC CONTROL	PEAK HOUR	EXISTING DELAY AND LOS	
				DELAY (a)	LOS (b)
1	Brockton Ave and University Ave	Signal	AM	23.0	C
			PM	28.4	C
2	Market St and University Ave	Signal	AM	23.6	C
			PM	31.7	C
3	Brockton Ave and 14th St	Signal	AM	22.6	C
			PM	22.1	C
4	14th St and RCH Entrance	One-Way Stop	AM	18.2	C
			PM	12.6	B
5	14th St and Market St/Magnolia Ave	Signal	AM	27.5	C
			PM	36.0	D
6	14th St and Lime St	Signal	AM	29.4	C
			PM	47.0	D
7	14th St and SR-91 WB Ramps	Signal	AM	19.4	B
			PM	22.1	C
8	14th St and SR-91 EB Ramps	Signal	AM	20.0	C
			PM	18.7	B
9	Brockton Ave and RCH Entrance	One-Way Stop	AM	25.6	D
			PM	39.6	**E**
10	Magnolia Ave and 15th/RCH	Signal	AM	11.7	B
			PM	15.3	B
11	Brockton Ave and Tequesquite Ave	Signal	AM	13.6	B
			PM	18.8	B
12	Brockton Ave and Terracina Dr	Signal	AM	4.6	A
			PM	3.2	A
13	Magnolia Ave and Terracina Dr	Signal	AM	18.3	B
			PM	19.4	B
14	Brockton and Ramona Dr	Signal	AM	7.3	A
			PM	4.8	A
15	Magnolia and Ramona Dr	Signal	AM	17.3	B
			PM	11.1	B

Notes:

Bold values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) Delay values are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 8.0

(c) Existing Conditions refers to actual conditions at the time this traffic study was undertaken, which represents current uses on the RCH site. The approved parking structure and MOB were under construction but not yet completed at the time that this study was undertaken.

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TABLE 5

SUMMARY OF ROADWAY OPERATIONS - EXISTING CONDITIONS [(a)]

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	LOS E CAPACITY	ADT	LOS
14th Street: West of Brockton Avenue	2-Lane Collector	12,500	3,099	B
14th Street: Brockton Avenue to Magnolia Avenue	4-Lane Arterial (100')	33,000	11,491	B
14th Street: Magnolia Avenue to Mulberry Avenue	4-Lane Arterial (100')	33,000	28,557	C
Brockton Avenue: University Avenue to 14th Street	4-Lane Arterial (88')	22,000	14,657	C
Brockton Avenue: 14th Street to Tequesquite Avenue	4-Lane Arterial (88')	22,000	17,643	C
Brockton Avenue: Tequesquite Avenue to Ramona Drive	4-Lane Arterial (88')	22,000	14,332	B
Market Street: University Avenue to 14th Street	4-Lane Arterial (110')	33,000	24,349	B
Magnolia Avenue: 14th Street to 15th Street	4-Lane Arterial (100')	33,000	27,031	C
Magnolia Avenue: 15th Street to Ramona Drive	4-Lane Arterial (100')	33,000	21,142	B

Notes:

Bold values indicate roadway segments operating at LOS E or F.

[(a)] Existing Conditions refers to actual conditions at the time this traffic study was undertaken, which represents current uses on the RCH site. The approved parking structure and MOB were under construction but not yet completed at the time that this study was undertaken.

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TABLE 6
SUMMARY OF PROJECT TRIP GENERATION
RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT - PHASE I

Land Use	ITE Code [2]	Trips per	Trip Generation Rates [1]						
				AM Peak Hour			PM Peak Hour		
			Daily	In	Out	Total	In	Out	Total
Hospital - Trips per Bed	610	Beds	12.940	0.950	0.370	1.320	0.469	0.951	1.420

Land Use	Quantity	Unit	Trip Generation Estimates						
				AM Peak Hour			PM Peak Hour		
			Daily	In	Out	Total	In	Out	Total
Hospital - New Bed Tower	189	Beds	2,446	180	70	250	89	180	269
Total Phase I Trips			**2,446**	**180**	**70**	**250**	**89**	**180**	**269**

Note: Phase I project trips represent future trip generation for the new bed tower. The approved MOB and parking structure that were under construction at the time this traffic study was undertaken are assumed as part of the Pre-EIR Baseline, and are not included in the project trip generation.

[1] Source: Institute of Transportation Engineers publication: Trip Generation Manual, 9th Edition

[2] The ITE Trip Generation Manual provides trip rates for the independent variables of "Beds" and "1,000 Square Feet". For uses associated with providing direct support for the hospital bed tower, the trip rates for "Beds" was used. For the remaining hospital areas associated with other site functions not directly related to the hospital beds, the trip rates for "1,000 Square Feet" was used.

KSF = Thousand Square Feet

TABLE 7
SUMMARY OF PROJECT TRIP GENERATION
RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT - PHASE II

Land Use	ITE Code [2]	Trips per	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Hospital - Trips per KSF	610	KSF	13.22	0.599	0.352	0.950	0.353	0.577	0.930
Hospital - Trips per Bed	610	Beds	12.94	0.950	0.370	1.320	0.469	0.951	1.420
Medical-Dental Office Building	720	KSF	36.13	1.89	0.50	2.39	1.00	2.57	3.57
Land Use	**Quantity**	**Unit**	**Trip Generation Estimates**						
			Daily	**AM Peak Hour**			**PM Peak Hour**		
				In	**Out**	**Total**	**In**	**Out**	**Total**
Hospital - New Bed Tower	377	Beds	4,878	358	139	497	177	359	536
Hospital - Bldg B and D beds relocated to Tower	-339	Beds	-4,387	-322	-125	-447	-159	-322	-481
Hospital - Bldg A to be demolished	-58.705	KSF	-776	-35	-21	-56	-21	-34	-55
Medical-Dental Office Building	100.00	KSF	3,613	189	50	239	100	257	357
Hospital - Bldg B and D Re-use *	187.53	KSF	2,479	112	66	178	66	108	174
Total Phase II Trips			**5,807**	**302**	**109**	**411**	**163**	**368**	**531**
Phase I Trips			**2,446**	**180**	**70**	**250**	**89**	**180**	**269**
Total Phase I and Phase II Trips			**8,253**	**482**	**179**	**661**	**252**	**548**	**800**
Internal Capture [3]	**30%**		**2,476**	**145**	**54**	**199**	**76**	**164**	**240**
Net New Project Trips			**5,777**	**337**	**125**	**462**	**176**	**384**	**560**

Note: Phase II project trips represent future trip generation for the build-out of the hospital specific plan. The approved MOB and parking structure that were under construction at the time this traffic study was undertaken are assumed as part of the Pre-EIR Baseline, and are not included in the project trip generation.

[1] Source: Institute of Transportation Engineers Trip Generation Manual, 9th Edition

[2] The ITE Trip Generation Manual provides trip rates for the independent variables of "Beds" and "1,000 Square Feet". For uses associated with providing direct support for the hospital bed tower, the trip rates for "Beds" was used. For the remaining hospital areas associated with other site functions not directly related to the hospital beds, the trip rates for "1,000 Square Feet" was used.

[3] Internal Capture trips are trips captured on-site as medical staff, resident physicians, students, and patients circulate on-site between the hospital, outpatient, medical offices, lab facilities and learning facilities on the campus. ITE trip generation rates are based on surveys of stand-alone uses not located in a medical campus environment. Based on conversations with Hospital representatives, a substantial number of trip purposes for each of the individual uses are and will continue to be captured on site as a result of the proximity of buildings and the walkability of the campus. As discussed with Hospital representatives and City staff, a 30% on-site capture was determined to be reasonable and conservative.

* Buildings B and D will be re-used as one or more medical campus functions, such as Hospital Administrative Support for the Bed Towers, Skilled Nursing, UCR Resident Facilities, Outpatient, etc.
- Trips for the Hospital Administrative Support uses (29,941 SF) are assumed to be included in the Bed Tower per-bed trips.
- Trips for the remaining uses are calculated based on the Hospital per-KSF rates.

Based on conversations with Hospital representatives, a substantial number of trip purposes for each of the individual uses are and will continue to be captured on site as a result of the proximity of buildings and the walkability of the campus. The trip generation estimates for Phase II include an assumption for internal capture of trips within the RCH campus, to represent the trips between the various campus facilities that are "captured" on-site (and therefore do not impact the off-site street system), as medical staff, resident physicians, patients and med students circulate on-site between the hospital, outpatient, medical offices, and lab facilities on the campus.

Trip Distribution and Assignment

Project trip distribution and assignment assumptions for the proposed project were developed in consultation with the City's Traffic Engineering staff. The distribution and assignment assumptions took into account existing traffic patterns for the current development on the RCH campus, and the approved and proposed changes to the site. Trip distribution and assignment assumptions are shown on **Figure 9**.

Based on the proposed project trip distribution, morning and evening peak hour project trips were assigned through the study intersections for Phase I and Phase II of the project. The resulting project-related trips on the surrounding street system for Phase I are shown on **Figure 10**. Project-related trips for Phase II are shown on **Figure 11**.

EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project analysis provides a summary of the impacts associated with adding project-related trips to existing traffic volumes. The Existing Plus Project scenario is a hypothetical scenario which assumes that the Project would be fully implemented at the present time. This analysis is required by the California Environmental Quality Act (CEQA), and assumes full development of the Project and full absorption of Project traffic on the existing circulation system. The results of the Existing Plus Project analysis can be found in ***Appendix D***.

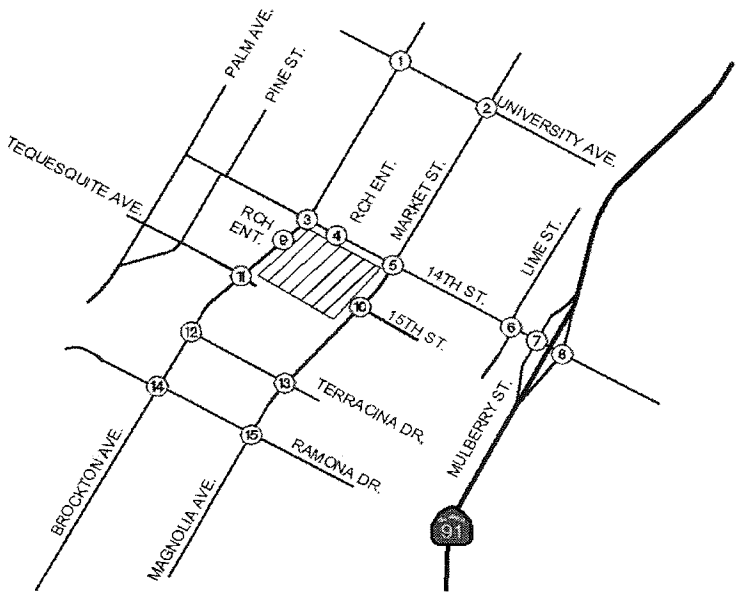
PRE-EIR BASELINE CONDITIONS [3]

As previously mentioned, an approved parking structure (Building O) and medical office building (Building P) are currently under construction on the RCH campus. These facilities are approved, and are assumed to be in place prior to the start of the RCH Specific Plan Expansion Project. For purposes of this traffic analysis for the Environmental Impact Report (EIR) for the RCH Expansion Project, any approved ongoing development currently under construction on the RCH campus is considered to be part of the Hospital development / approvals baseline (Pre-EIR Baseline Conditions).

As indicated on Table 1, when Building P is complete, the existing medical office building (Building N) will be vacated and the physicians in that building will either relocate to Building P or move off-site. Since the old and the new medical office buildings are virtually the same square footage, there would be no change in traffic volumes associated with the completion of Building P and the vacation of Building N.

[3] As stated earlier, the Existing Plus Approved RCH site uses scenario represents the Pre-EIR Baseline, which includes the current uses on the RCH site, plus the approved MOB and parking structure, along with the redistribution of Hospital traffic that will occur when the parking structure is complete.

1	Brockton Avenue: 10% ⇩ University Avenue: 5% ⇨	Brockton Avenue: (5%) ⇨ (10%) ⇨ University Avenue:	**2** Market Street: 5% ⇩ University Avenue: 5% ⇨
3	Brockton Avenue: 10% ⇦ 5% ⇨ 14th Street: 3% ⇨	Brockton Avenue: (5%) ⇨ 14th Street: 27% ⇨ 14th Street: (3%) ⇨ (10%) ⇨ (27%) ⇨	**4** 14th Street: 27% ⇧ 10% ⇨ 14th Street: (27%) ⇩ 5% ⇨
5 Market/Magnolia: 15% ⇦ 5% ⇩ 14th Street: (15%) ⇨ (22%) ⇩	14th Street: 22% ⇧ 3% ⇨ 14th Street: (5%) ⇧ (3%) ⇨	**6** Lime Street: (17%) ⇩ (3%) ⇨	14th Street: 17% ⇧ 14th Street: 3% ⇨
7 SR-91 WB Ramps: 5% ⇨ 14th Street: (5%) ⇨ (12%) ⇩	14th Street: 12% ⇧	**8** SR-91 EB Ramps: (5%) ⇨ (7%) ⇩ 14th Street: 5% ⇨	14th Street: 7% ⇧
9 Brockton Avenue: 15% ⇦ 25% ⇨ RCH Entrance: (15%) ⇨ 5% ⇨	RCH Entrance: (25%) ⇨ (5%) ⇨	**10** Magnolia Avenue: 8% ⇦ 15th/RCH: (8%) ⇨ (2%) ⇩ (5%) ⇨	15th/RCH: 2% ⇧ 15th/RCH: 5% ⇨
11 Brockton Avenue: (5%) ⇩ 15% ⇨ Tequesquite: 5% ⇩	Tequesquite: (15%) ⇨ (5%) ⇧ (20%) ⇦ Tequesquite: 5% ⇧ 20% ⇨	**12** Brockton Avenue: (20%) ⇦ (5%) ⇨ Terracina Drive: 20% ⇧	Terracina Drive: 5% ⇨
13 Magnolia Avenue: (5%) ⇩ Terracina Drive: (5%) ⇩	Terracina Drive: 5% ⇧ Terracina Drive: 5% ⇧	**14** Brockton Avenue: (15% ⇩ (5%) ⇨ Ramona Drive:	Ramona Drive: 5% ⇨ Ramona Drive: 15% ⇧
15 Magnolia Avenue: (5%) ⇩ Ramona Drive: (5%) ⇨	Ramona Drive: 5% ⇨ 5% ⇧		



Legend

X% / (Y%) = IN / OUT PERCENT DISTRIBUTION

NOT TO SCALE

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Figure 9

Project Trip Distribution

1
- Brockton Avenue: 18 / 9
- University Avenue: 9 / 4; 4 / 9; 7 / 18

2
- Market Street: 9 / 4
- University Avenue: 9 / 4; 4 / 9; 4 / 9; 4 / 9

3
- Brockton Avenue: 18 / 9; 9 / 4
- 14th Street: 4 / 9; 49 / 24; 5 / 3; 2 / 5; 7 / 18; 19 / 49

4
- 14th Street: 49 / 24; 18 / 9; 19 / 49; 9 / 4; 4 / 9; 7 / 18

5
- Market/Magnolia: 27 / 13; 9 / 4; 11 / 27; 15 / 40
- 14th Street: 40 / 20; 5 / 3; 4 / 9; 2 / 5

6
- Lime Street: 12 / 31; 2 / 5
- 14th Street: 31 / 15; 5 / 3

7
- SR-91 WB Ramps: 9 / 4; 4 / 9; 8 / 22
- 14th Street: 22 / 11

8
- SR-91 EB Ramps: 4 / 9; 5 / 13
- 14th Street: 13 / 6; 9 / 4

9
- Brockton Avenue: 27 / 13; 45 / 22
- RCH Entrance: 18 / 45; 4 / 9; 11 / 27; 9 / 4

10
- Magnolia Avenue: 14 / 7; 6 / 14; 1 / 4; 4 / 9
- 15th/RCH: 4 / 2; 9 / 4

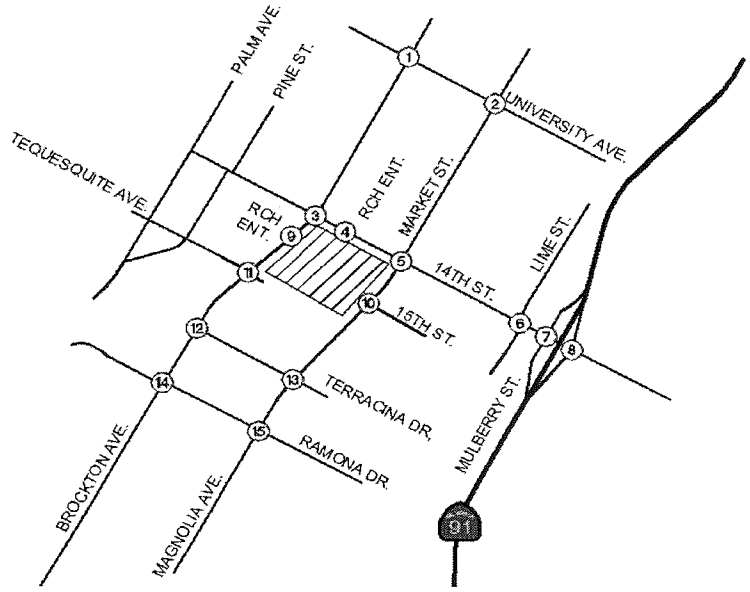
11
- Brockton Avenue: 4 / 9; 27 / 13; 9 / 4
- Tequesquite: 11 / 27; 4 / 9; 14 / 36; 9 / 4; 36 / 18

12
- Brockton Avenue: 14 / 36; 4 / 9
- Terracina Drive: 9 / 4; 36 / 18

13
- Magnolia Avenue: 4 / 9; 4 / 9
- Terracina Drive: 9 / 4; 9 / 4

14
- Brockton Avenue: 11 / 27; 4 / 9
- Ramona Drive: 9 / 4; 27 / 13

15
- Magnolia Avenue: 4 / 9; 4 / 9
- Ramona Drive: 9 / 4; 9 / 4



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

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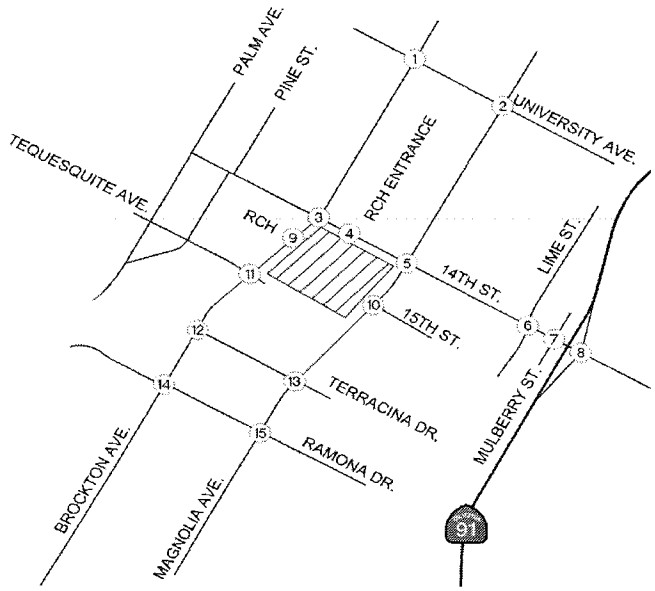
Figure 10

Project-Related Traffic - Phase I

Riverside Community Hospital

1	⇩ 34 / 18 Brockton Avenue ⇨ 17 / 9	University Avenue ⇦ ⇧ 6 / 19 13 / 38	**2** ⇩ 17 / 9 Market Street ⇨ 17 / 9	University Avenue ⇦ ⇧ ⇨ 6 / 19 6 / 19 6 / 19
3	⇩ ⇦ 34 / 18 17 / 9 Brockton Avenue ⇨ 10 / 5	⇦ 6 / 19 ⇦ 91 / 48 14th Street ⇦ ⇧ ⇨ 4 / 12 13 / 38 34 / 104	**4** ⇧ ⇦ 91 / 48 34 / 18 34 / 104 17 / 9 ⇩	14th Street ⇦ ⇨ 6 / 19 13 / 38
5	⇦ ⇩ 51 / 26 17 / 9 Market/Magnolia 19 / 58 28 / 84 ⇨	⇧ ⇦ 74 / 39 10 / 5 14th Street ⇧ ⇦ 6 / 19 4 / 12	**6** Lime Street 21 / 65 4 / 12 ⇩	⇧ 57 / 30 14th Street ⇦ 10 / 5
7	⇦ 17 / 9 SR-91 WB Ramps 6 / 19 15 / 46 ⇩	⇧ 40 / 21 14th Street	**8** SR-91 EB Ramps 6 / 19 9 / 27 ⇩	⇧ 24 / 12 14th Street ⇦ 17 / 9
9	⇩ ⇦ 51 / 26 84 / 44 Brockton Avenue	⇦ 31 / 96 ⇦ 6 / 19 RCH Entrance ⇧ ⇦ 19 / 58 17 / 9	**10** ⇦ 27 / 14 Magnolia Avenue 10 / 31 3 / 8 6 / 19 ⇩	⇧ 7 / 4 15th/RCH ⇦ 17 / 9
11	⇩ ⇦ 6 / 19 51 / 26 Brockton Avenue 17 / 9 ⇩	⇦ 19 / 58 ⇧ 6 / 19 ⇦ 25 / 77 Tequesquite ⇧ ⇦ 17 / 9 67 / 35	**12** ⇩ ⇦ 25 / 77 6 / 19 Brockton Avenue	⇦ 17 / 9 Terracina Drive ⇧ 67 / 35
13	⇩ 6 / 19 Magnolia Avenue 6 / 19 ⇩	⇧ 17 / 9 Terracina Drive ⇧ 17 / 9	**14** ⇩ ⇦ 19 / 58 6 / 19 Brockton Avenue	⇦ 17 / 9 Ramona Drive ⇧ 51 / 26
15	⇩ 6 / 19 Magnolia Avenue 6 / 19 ⇩	Ramona Drive ⇦ ⇧ 17 / 9 17 / 9		



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

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Figure 11

Project-Related Traffic - Phase II

K:\ORA_TPTO\ZSAC\Projects\Projects for Others\Riverside Hospital\2013 RCH TIA\Excel\[RCH_TA01 REV2.xlsm]Proj Assign PH2 Figure 1-16

Campus Traffic Redistribution

Once the 1,060-space parking structure is complete and open, some traffic patterns for existing Hospital employees and visitors will shift from the current main entrance at Magnolia Avenue and 15th Street to the new parking structure entrance at Brockton Avenue and Tequesquite Avenue. Reassigned traffic volumes for RCH campus traffic are shown on **Figure 12**. The resulting peak hour traffic volumes at the study intersections are shown on **Figure 13**. This Redistribution Condition will serve as the Pre-EIR Baseline for determination of project impacts.

Intersection Analysis – Redistribution Conditions (Pre-EIR Baseline)

The analysis results for the Redistribution Conditions (Pre-EIR Baseline) are shown on **Table 8**. Intersection Level of Service worksheets are provided in ***Appendix D***. Review of this table shows that, under the Redistribution Conditions, all study intersections would operate at LOS D or better during both peak periods, with the exception of the following:

- 9. Brockton Avenue and the RCH Entrance: PM Peak – LOS E

Intersection Analysis – Pre-EIR Baseline Plus Phase 1 Project

The Phase I project traffic was added to the Pre-EIR Baseline scenario to produce Pre-EIR Baseline Plus Project analysis results. Phase 1 of the project consists of the construction of a seven-story bed tower with 189 beds.

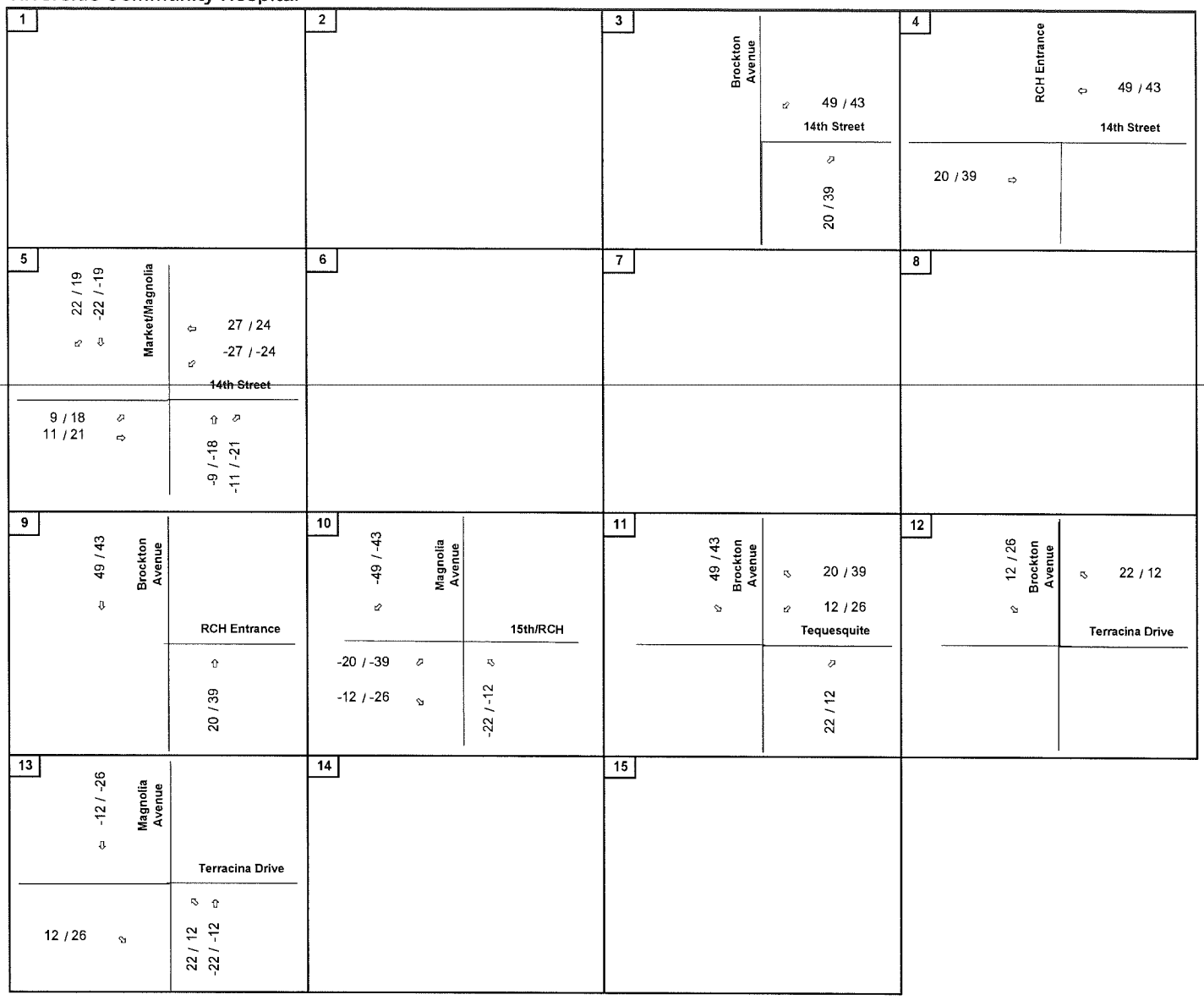
Pre-EIR Baseline Plus Phase 1 Project traffic peak hour volumes are shown on **Figure 14**. The intersection analysis was conducted for the Pre-EIR Baseline Plus Phase 1 Project scenario, and the results are presented on **Table 9**. Intersection analysis worksheets are provided in Appendix D. Review of this table indicates that one intersection would operate at a deficient level of service under the Pre-EIR Baseline Plus Phase 1 Project scenario:

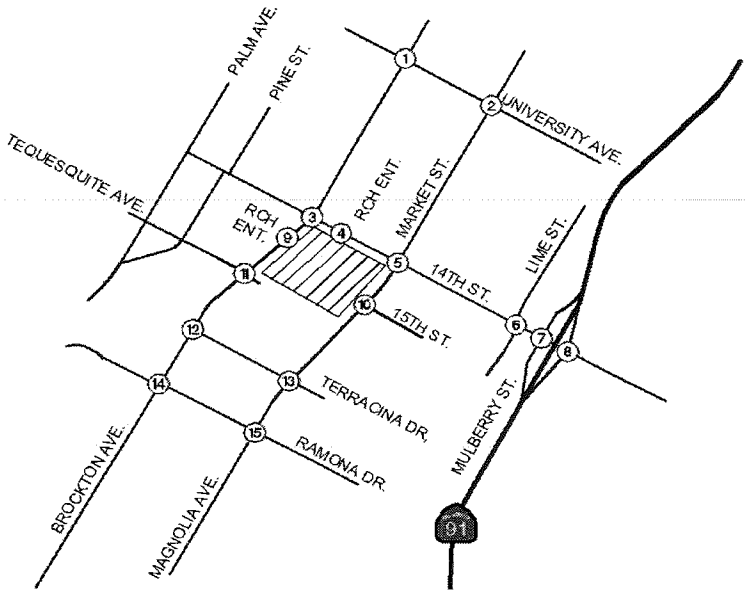
- 9. Brockton Avenue and the RCH Entrance: PM Peak – LOS F

The project's impact would be considered significant at the following study intersections:

- 4. Brockton Avenue and 14th Street
  - AM – LOS C: project impact 8.2 seconds
- 14th Street and RCH Entrance
  - PM – LOS D: project impact 12.5 seconds
- 14th Street and Market Street/Magnolia Avenue
  - PM – LOS D: project impact 13.1 seconds
- 14th Street and SR-91 WB Ramps
  - PM – LOS C: project impact 8.4 seconds
- Brockton Avenue and the RCH Entrance
  - AM – LOS F: deficiency caused by the project
  - PM – LOS F: project impact 240.3 seconds

Mitigation measures for the project impacts are presented in subsequent scenarios later in this report.





Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

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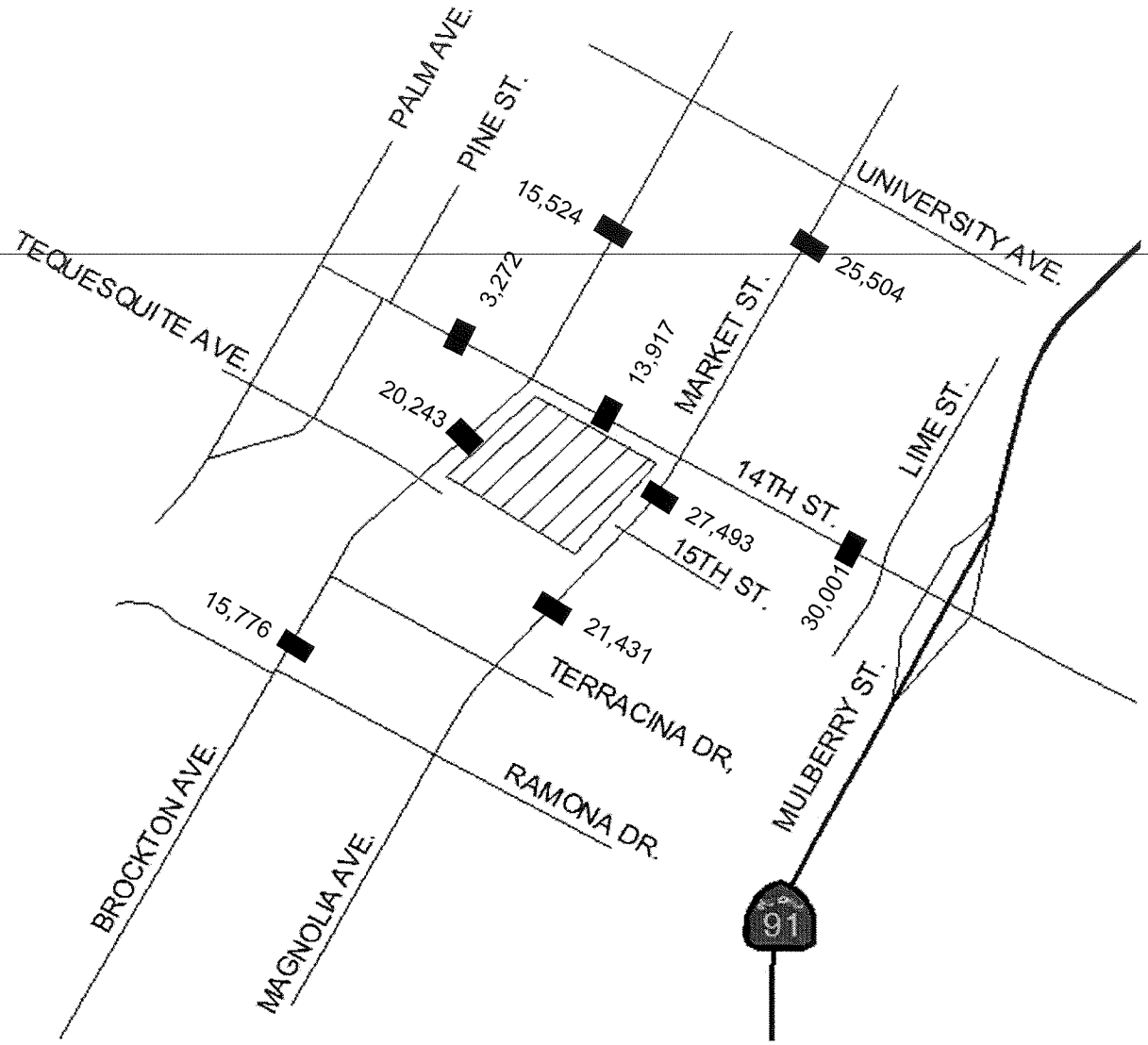
Figure 12

Redistributed Hospital Traffic Volumes



Legend

■ X,XXX = Average Daily Traffic

NOT TO SCALE

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Figure 13

Existing Plus Project ADT

TABLE 8
SUMMARY OF INTERSECTION OPERATIONS
REDISTRIBUTION CONDITIONS (PRE-EIR BASELINE) [c]

INTERSECTION		TRAFFIC CONTROL	PEAK HOUR	REDISTRIBUTED BASE	
				DELAY (a)	LOS (b)
1	Brockton Ave and University Ave	Signal	AM	23.0	C
			PM	28.4	C
2	Market St and University Ave	Signal	AM	23.6	C
			PM	31.7	C
3	Brockton Ave and 14th St	Signal	AM	26.2	C
			PM	24.8	C
4	14th St and RCH Entrance	One-Way Stop	AM	18.7	C
			PM	12.9	B
5	14th St and Market St/Magnolia Ave	Signal	AM	25.8	C
			PM	25.1	C
6	14th St and Lime St	Signal	AM	29.4	C
			PM	47.0	D
7	14th St and SR-91 WB Ramps	Signal	AM	19.4	B
			PM	22.1	C
8	14th St and SR-91 EB Ramps	Signal	AM	20.5	C
			PM	18.8	B
9	Brockton Ave and RCH Entrance	One-Way Stop	AM	27.4	D
			PM	46.4	**E**
10	Magnolia Ave and 15th/RCH	Signal	AM	10.6	B
			PM	12.5	B
11	Brockton Ave and Tequesquite Ave	Signal	AM	16.1	B
			PM	20.2	C
12	Brockton Ave and Terracina Dr	Signal	AM	5.0	A
			PM	3.5	A
13	Magnolia Ave and Terracina Dr	Signal	AM	18.6	B
			PM	19.6	B
14	Brockton Ave and Ramona Dr	Signal	AM	7.3	A
			PM	4.8	A
15	Magnolia Ave and Ramona Dr	Signal	AM	17.3	B
			PM	11.1	B

Notes:

Bold values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a one-way stop-controlled intersection, delay refers to the movement with the highest delay.

(b) Delay values are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 8.0

(c) The Pre-EIR Baseline represents the current uses on the RCH site, plus the approved parking structure and MOB, which were under construction but not yet completed at the time that this study was undertaken.

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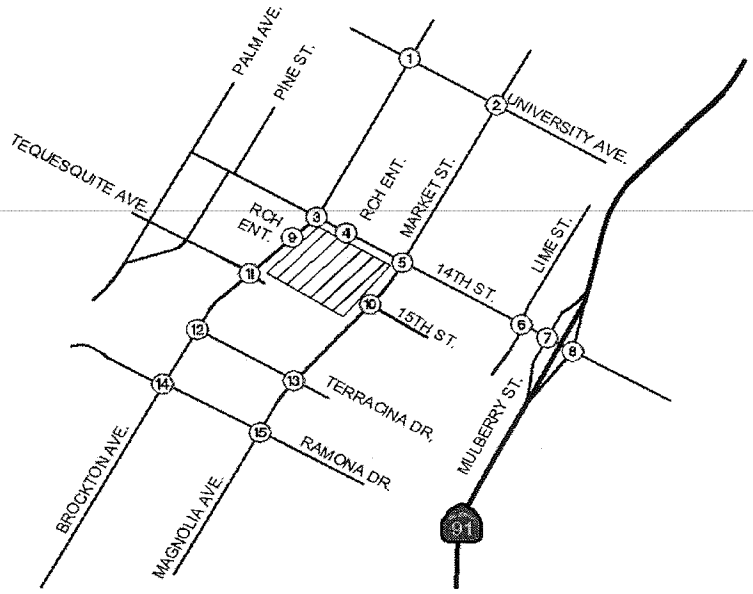
Riverside Community Hospital

1	5 / 7 332 / 345 25 / 61 **Brockton Avenue**	19 / 25 121 / 215 83 / 146 **University Avenue**	3 / 2 172 / 257 254 / 230
		79 / 194 415 / 454 104 / 107	
2	38 / 81 1139 / 1131 82 / 237 **Market Street**	97 / 81 193 / 290 79 / 103 **University Avenue**	60 / 67 250 / 357 53 / 69
		39 / 87 511 / 889 67 / 187	
3	13 / 17 510 / 674 146 / 119 **Brockton Avenue**	82 / 146 59 / 115 276 / 328 **14th Street**	34 / 28 91 / 81 38 / 27
		18 / 20 625 / 481 257 / 282	
4		758 / 1219 19 / 13 **14th Street**	859 / 892 28 / 7
		6 / 9 9 / 32	
5	136 / 124 535 / 919 104 / 127 **Market/Magnolia**	112 / 85 572 / 478 323 / 323 **14th Street**	89 / 114 392 / 507 52 / 98
		41 / 77 556 / 537 187 / 253	
6	30 / 65 142 / 673 56 / 371 **Lime Street**	308 / 84 1826 / 1059 414 / 407 **14th Street**	21 / 32 590 / 986 111 / 229
		66 / 52 198 / 167 350 / 488	
7	708 / 312 162 / 60 123 / 161 **SR-91 WB Ramps**	1778 / 1254 282 / 309 **14th Street**	4 / 9 842 / 1549 127 / 279
8	**SR-91 EB Ramps**	170 / 106 1406 / 1056 **14th Street**	439 / 530 502 / 1192
		676 / 515 2 / 3 98 / 375	
9	698 / 1196 67 / 28 **Brockton Avenue**	41 / 81 14 / 25 **RCH Entrance**	
		838 / 806 78 / 16	
10	62 / 49 611 / 1334 51 / 72 **Magnolia Avenue**	29 / 48 15 / 4 39 / 108 **15th/RCH**	25 / 53 5 / 23 16 / 35
		31 / 15 842 / 662 59 / 56	
11	113 / 172 466 / 973 113 / 76 **Brockton Avenue**	43 / 165 7 / 30 46 / 162 **Tequesquite**	189 / 144 18 / 12 24 / 69
		53 / 44 691 / 481 99 / 45	
12	502 / 883 120 / 80 **Brockton Avenue**	118 / 37 17 / 5 **Terracina Drive**	
		734 / 456 52 / 19	
13	86 / 83 439 / 852 177 / 349 **Magnolia Avenue**	23 / 80 11 / 26 15 / 53 **Terracina Drive**	92 / 24 21 / 38 96 / 69
		87 / 55 530 / 532 87 / 176	
14	3 / 5 408 / 765 70 / 78 **Brockton Avenue**	124 / 38 2 / 3 45 / 31 **Ramona Drive**	5 / 4 2 / 2 8 / 5
		4 / 9 678 / 431 89 / 21	
15	98 / 18 391 / 843 49 / 68 **Magnolia Avenue**	53 / 59 96 / 32 32 / 56 **Ramona Drive**	47 / 14 139 / 69 68 / 28
		96 / 21 847 / 835 131 / 106	



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

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Figure 14

Pre-EIR Baseline Plus Phase I Peak-Hour Traffic Volumes

K:\ORA_TPTO\ZSAC\Projects\Projects for Others\Riverside Hospital\2013 RCH TIA\Excel\[RCH_TA01 Pre-EIR Phase 1.xlsm]Pre-EIR WP Figure 1-16

TABLE 9

SUMMARY OF INTERSECTION OPERATIONS

PRE-EIR BASELINE PLUS PHASE I PROJECT [b]

	INTERSECTION	PEAK HOUR	PRE-EIR BASELINE		PRE-EIR BASELINE PLUS PHASE I PROJECT		DIFFERENCE IN DELAY	SIGNIFICANT?
			DELAY [a]	LOS	DELAY [a]	LOS		
1	Brockton Ave and University Ave	AM	23.0	C	23.9	C	0.9	NO
		PM	28.4	C	29.5	C	1.1	NO
2	Market St and University Ave	AM	23.6	C	24.5	C	0.9	NO
		PM	31.7	C	32.5	C	0.8	NO
3	Brockton Ave and 14th St	AM	26.2	C	34.4	C	8.2	**YES**
		PM	24.8	C	28.6	C	3.8	NO
4	14th St and RCH Entrance	AM	18.7	C	21.8	C	3.1	NO
		PM	12.9	B	25.4	D	12.5	**YES**
5	14th St and Market St/Magnolia Ave	AM	25.8	C	26.6	C	0.8	NO
		PM	25.1	C	38.2	D	13.1	**YES**
6	14th St and Lime St	AM	29.4	C	30.0	C	0.6	NO
		PM	47.0	D	49.1	D	2.1	NO
7	14th St and SR-91 WB Ramps	AM	19.4	B	20.9	B	1.5	NO
		PM	22.1	C	24.0	C	1.9	NO
8	14th St and SR-91 EB Ramps	AM	20.5	C	20.8	C	0.3	NO
		PM	18.8	B	18.9	B	0.1	NO
9	Brockton Ave and RCH Entrance	AM	27.4	D	53.3	**F**	25.9	**YES**
		PM	46.4	**E**	286.7	**F**	240.3	**YES**
10	Magnolia Ave and 15th/RCH	AM	10.6	B	11.1	B	0.5	NO
		PM	12.5	B	13.5	B	1.0	NO
11	Brockton Ave and Tequesquite Ave	AM	16.1	B	18.8	B	2.7	NO
		PM	20.2	C	21.0	C	0.8	NO
12	Brockton Ave and Terracina Dr	AM	0.9	A	0.8	A	-0.1	NO
		PM	0.9	A	0.9	A	0.0	NO
13	Magnolia Ave and Terracina Dr	AM	18.6	B	18.7	B	0.1	NO
		PM	19.6	B	19.7	B	0.1	NO
14	Brockton Ave and Ramona Dr	AM	7.3	A	7.6	A	0.3	NO
		PM	4.8	A	5.0	A	0.2	NO
15	Magnolia Ave and Ramona Dr	AM	17.3	B	17.6	B	0.3	NO
		PM	11.1	B	11.3	B	0.2	NO

Notes:

Bold and shaded values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.

[a] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a one-way stop-controlled intersection, delay refers to the movement with the highest delay.

[b] The Pre-EIR Baseline represents the current uses on the RCH site, plus the approved parking structure and MOB, which were under construction but not yet completed at the time that this study was undertaken.

Roadway Segment Analysis – Pre-EIR Baseline Plus Phase 1 Project

The Pre-EIR Plus Phase 1 Project daily roadway volumes are presented on **Figure 15**. The daily roadway segment analysis was conducted for the Pre-EIR Baseline Plus Phase 1 Project scenario, and the results are presented on **Table 10**. Review of this table indicates that all study roadway segments would operate at LOS D or better. There are no new impacts to roadway segments with the addition of Phase I traffic to the Pre-EIR Baseline scenario.

FUTURE CONDITIONS

The traffic-related impacts of the Riverside Community Hospital Expansion Project will be evaluated in two project phases:

- Phase I – Opening Year 2014
- Phase II – Build-out

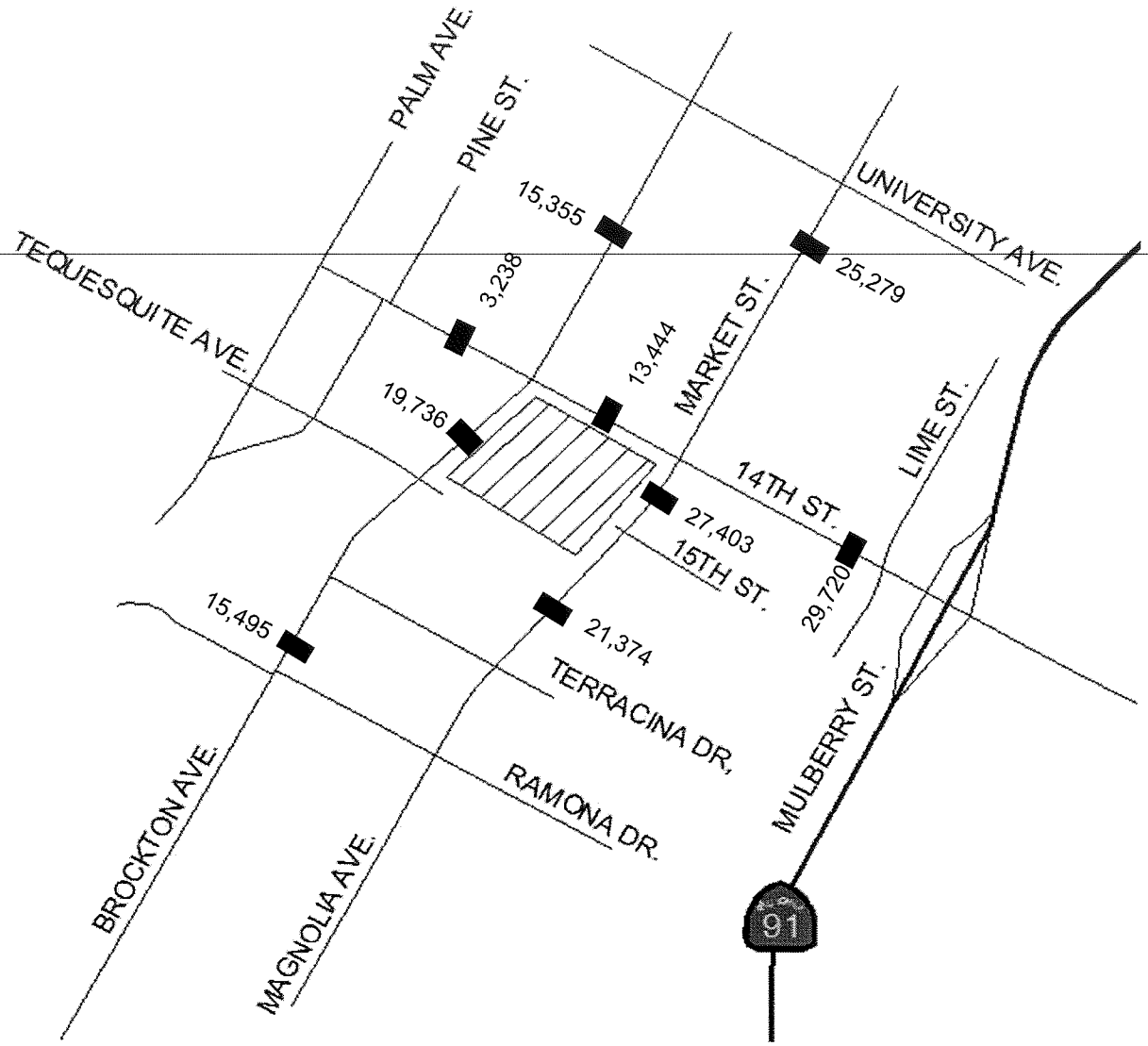
Year 2014 Cumulative Conditions

This section provides a description of peak hour and daily traffic operating conditions at the time Phase I of the proposed project is estimated to be completed. Opening Year for Phase I is assumed to be Year 2014. Opening Year 2014 Cumulative Conditions traffic forecasts were developed using the following "build-up" forecasting method:

- Existing traffic volumes, plus
- An annual growth rate of 0.5% per year to the Opening Year, plus
- Cumulative projects traffic
  - Cumulative projects consist of projects that have been approved but are not yet built and fully occupied, as well as projects that are in various stages of the application and approval process, but have not yet been approved. These projects are considered to be "reasonably foreseeable," and must therefore be included in the Cumulative Projects analysis.

Cumulative Project information was obtained from the City of Riverside at the start of the study process. A summary of the Cumulative Projects included in the Cumulative Conditions analysis is provided on **Table 11**. The location of the Cumulative Projects in relation to the project site is shown on **Figure 16**. The Cumulative Projects analysis includes the Medical Office Building and parking structure currently under construction on the RCH campus.

Project-related trips for the Cumulative Projects were added to the study area intersections and roadways. Year 2014 Cumulative peak hour turning movement volumes at the study intersections are shown on **Figure 17**. Year 2014 Cumulative ADT roadway segment volumes are shown on **Figure 18**.



Legend

■ X,XXX = Average Daily Traffic

NOT TO SCALE

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Figure 15

Pre-EIR Baseline Plus Phase I Project Daily Traffic Volumes

K:\ORA_TPTO\ZSAC\Projects\Projects for Others\Riverside Hospital\2013 RCH TIA\Excel\[RCH_RS01 Oct 2013 Pre-EIR Phase I.xlsm]ADT Fig (P)\Pre-EIR Baseline Plus Phase I Project Daily Traffic Volumes

TABLE 10

SUMMARY OF ROADWAY OPERATIONS - PRE-EIR BASELINE PLUS PHASE I CONDITIONS

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	LOS E CAPACITY	PRE-EIR BASELINE		PRE-EIR WITH PHASE I		PROJECT TRAFFIC	SIGNIFICANT?
			ADT	LOS	ADT	LOS		
14th Street: West of Brockton Avenue	2-Lane Collector	12,500	3,165	B	3,238	B	73	NO
14th Street: Brockton Avenue to Magnolia Avenue	4-Lane Arterial (100')	33,000	12,417	B	13,444	B	1,027	NO
14th Street: Magnolia Avenue to Mulberry Avenue	4-Lane Arterial (100')	33,000	29,108	C	29,720	D	612	NO
Brockton Avenue: University Avenue to 14th Street	4-Lane Arterial (88')	22,000	14,988	C	15,355	C	367	NO
Brockton Avenue: 14th Street to Tequesquite Avenue	4-Lane Arterial (88')	22,000	18,635	C	19,736	D	1,101	NO
Brockton Avenue: Tequesquite Avenue to Ramona Drive	4-Lane Arterial (88')	22,000	14,883	C	15,495	C	612	NO
Market Street: University Avenue to 14th Street	4-Lane Arterial (110')	33,000	24,790	B	25,279	B	489	NO
Magnolia Avenue: 14th Street to 15th Street	4-Lane Arterial (100')	33,000	27,207	C	27,403	C	196	NO
Magnolia Avenue: 15th Street to Ramona Drive	4-Lane Arterial (100')	33,000	21,252	B	21,374	B	122	NO

Notes:
Bold values indicate roadway segments operating at LOS E or F. **Bold and shaded** results indicate a significant project impact.

TABLE 11
SUMMARY OF CUMULATIVE PROJECTS

#	Project Name	Location	Land Use	Quantity	Unit	Project Trips [1]				
							AM Peak		PM Peak	
						ADT	In	Out	In	Out
36	Vocational School	1820-1860 University Avenue	Junior/Community College	7.500	KSF	206	17	6	11	8
94	Rezone to CR-SP for Commercial Development	1820-1860 University Avenue	Apartments	-45.000	KSF	-299	-5	-18	-18	-10
			Commercial Office	34.200	KSF	377	47	6	9	42
82	Condominium Complex	NW Corner of Dominion Ave and Division St	Residential Condominium	36	DU	209	3	13	13	6
56	LA Fitness Expansion	3439 Arlington Avenue	Health/Fitness Center	9.600	KSF	316	6	7	19	15
10	Riverside Packing House	3141 Ninth St	General Light Industrial	-26.849	KSF	-187	-22	-3	-3	-23
			General Office Building	39.837	KSF	439	55	7	10	49
27	Senior Housing Complex	2340 14th Street	Senior Housing - Attached	120	DU	413	8	16	16	14
3	3-Story Office	3950 and 3952 Vine St	Commercial Office	60.558	KSF	668	83	11	15	75
90	9-Lot Subdivision	3745 Strong St	Single Family Resid.	9	DU	86	2	5	6	3
14	48-Unit Residential, Commercial Retail	3105 Market St	Apartments	48	DU	319	5	20	19	10
			Shopping Center	27.220	KSF	1,162	16	10	48	53
68	Raincross Promenade, 141-Unit Condo	3225 Main St	Residential Condominium	141	DU	819	11	51	49	24
2	Fox Plaza	3520 Market St	Shopping Center	31.600	KSF	1,349	19	12	56	61
			Condominium	205	DU	1,191	15	75	71	35
116	Jacobs Medical Office	4577 Brockton Ave	Medical Office Building	65.281	KSF	2,359	123	33	65	168
34	Church with 180 Fixed Seats	4183 Fairgrounds St	General Light Industrial	-10.312	KSF	-72	-8	-1	-1	-9
			Church	10.312	KSF	94	4	2	3	3
57	2-Story Senior Housing Facility	5938-5944 Grand Avenue	Senior Housing - Attached	37	DU	127	3	5	5	4
58	Vocational School	3550 Vine Street	Commercial Office	-40.060	KSF	-442	-55	-7	-10	-50
			Junior/Community College	252	Student	302	25	5	19	11
66	Low Income Apartments	2450 Market St	Apartments	75	DU	499	8	31	30	16
-	Riverside Community College Admin Building	NE Corner Market and Ramona	Administration Building	79	Emp	292	38	5	6	34
1	Riverside Community Hospital MOB	4510 Brockton Avenue	Medical Office Building	61.000	KSF	2,204	115	31	61	157
1	Existing MOB to be vacated	Riverside Community Hospital Campus	MOB to be vacated	-61.135	KSF	-2,209	-115	-31	-61	-157
				Total		***10,222***	***398***	***291***	***438***	***539***

KSF = Thousand Square Feet, DU = Dwelling Units, Emp = Employees

ADT = Average Daily Traffic

Negative trips indicate removal of existing land uses or change in zoning.

[1] Project trips represent future trip generation associated with the remaining un-built / un-occupied development, based on the project status information provided by the City.

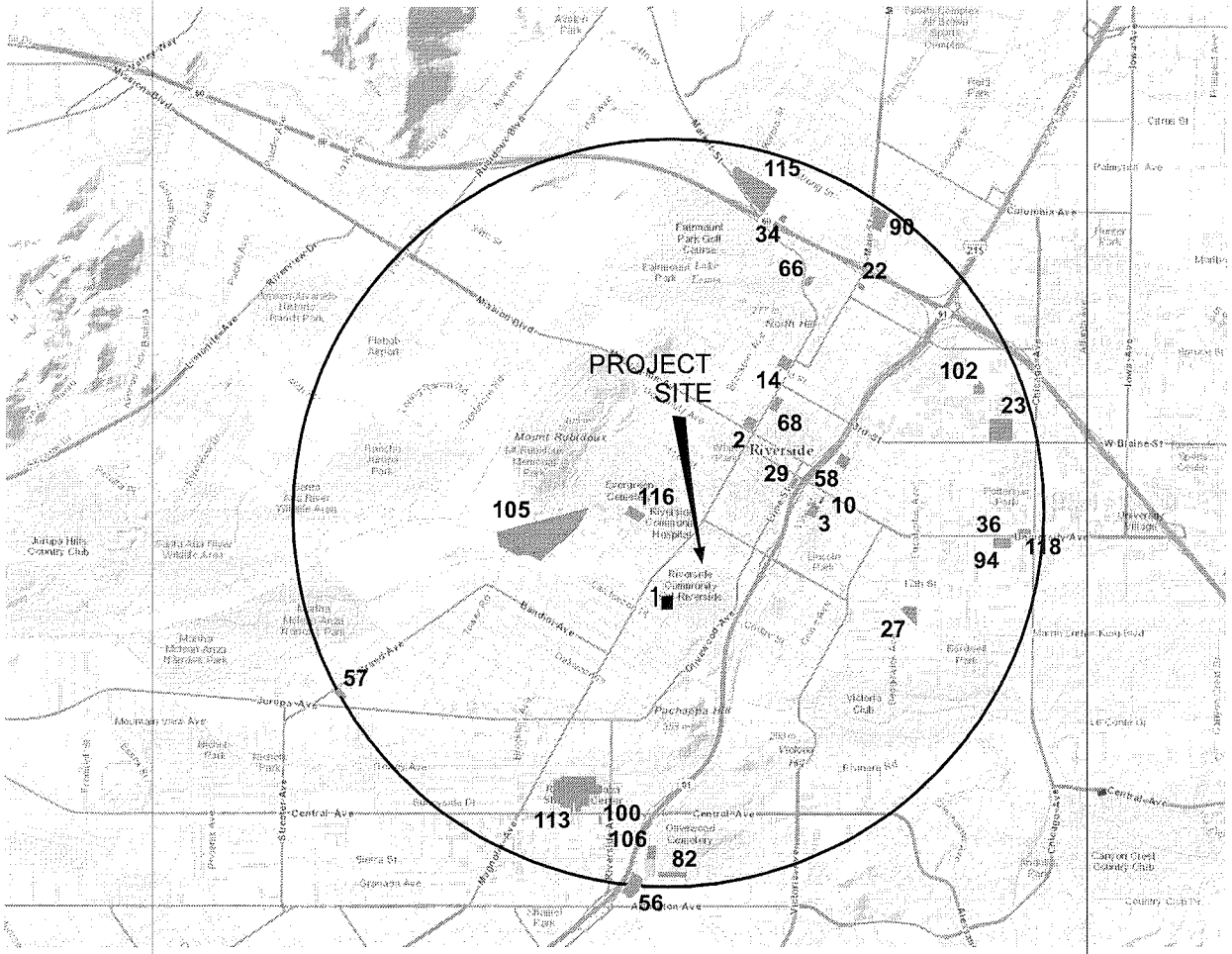

FIGURE 16
LOCATION OF CUMULATIVE PROJECTS

NOT TO SCALE

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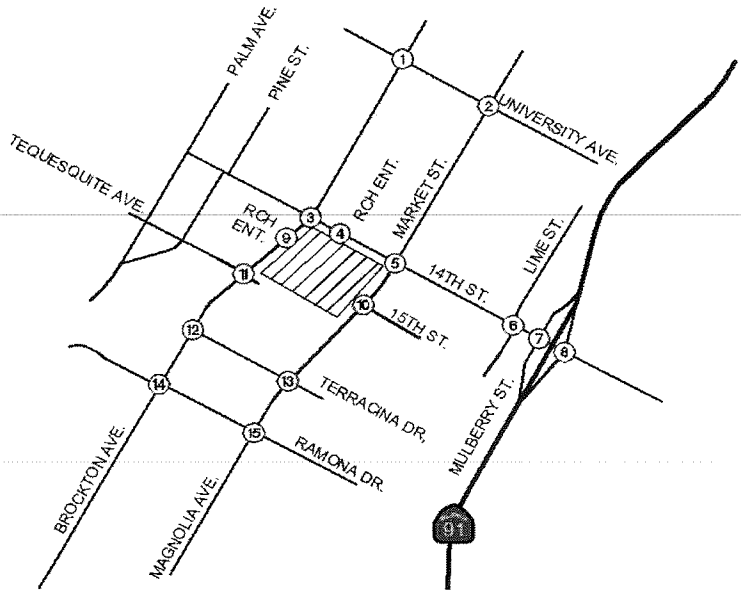
1	5 / 7 328 / 345 27 / 63 **Brockton Avenue**	21 / 26 131 / 237 94 / 169 **University Avenue**	3 / 2 191 / 273 246 / 227	75 / 186 413 / 455 125 / 122
2	52 / 93 1205 / 1206 93 / 241 **Market Street**	98 / 92 199 / 318 73 / 120 **University Avenue**	64 / 85 283 / 366 46 / 72	39 / 83 544 / 988 86 / 184
3	13 / 17 513 / 692 138 / 116 **Brockton Avenue**	78 / 138 59 / 116 315 / 353 **14th Street**	34 / 28 91 / 81 33 / 24	16 / 15 642 / 490 262 / 353
4		714 / 1202 2 / 5 **14th Street**	867 / 965 19 / 3	2 / 0 2 / 14
5	110 / 112 565 / 977 105 / 128 **Market/Magnolia**	119 / 91 537 / 461 322 / 323 **14th Street**	85 / 121 396 / 553 52 / 98	43 / 80 561 / 538 186 / 250
6	30 / 65 143 / 676 56 / 373 **Lime Street**	310 / 84 1814 / 1057 416 / 409 **14th Street**	21 / 32 586 / 970 110 / 225	61 / 49 199 / 168 352 / 490
7	702 / 310 163 / 60 125 / 164 **SR-91 WB Ramps**	1775 / 1257 285 / 312 **14th Street**	843 / 1545 128 / 280	
8	**SR-91 EB Ramps**	173 / 108 1411 / 1065 **14th Street**	437 / 524 505 / 1196	670 / 514 2 / 3 99 / 379
9	779 / 1258 23 / 7 **Brockton Avenue**	23 / 37 10 / 16 **RCH Entrance**		875 / 925 69 / 12
10	50 / 43 653 / 1411 51 / 72 **Magnolia Avenue**	29 / 48 11 / 2 39 / 109 **15th/RCH**	20 / 41 4 / 19 12 / 26	22 / 11 889 / 726 59 / 56
11	114 / 173 478 / 1020 86 / 63 **Brockton Avenue**	32 / 139 3 / 21 32 / 127 **Tequesquite**	190 / 145 9 / 8 24 / 69	53 / 44 728 / 500 63 / 27
12	504 / 902 117 / 71 **Brockton Avenue**	110 / 33 17 / 5 **Terracina Drive**		744 / 461 52 / 19
13	86 / 83 476 / 917 178 / 351 **Magnolia Avenue**	23 / 80 2 / 20 15 / 53 **Terracina Drive**	92 / 24 15 / 29 96 / 69	87 / 55 567 / 592 87 / 177
14	3 / 5 413 / 793 66 / 69 **Brockton Avenue**	116 / 34 2 / 3 45 / 31 **Ramona Drive**	5 / 4 2 / 2 8 / 5	4 / 9 697 / 441 89 / 21
15	98 / 18 423 / 906 49 / 68 **Magnolia Avenue**	53 / 59 96 / 32 32 / 56 **Ramona Drive**	47 / 14 140 / 69 64 / 19	87 / 17 884 / 891 132 / 107



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

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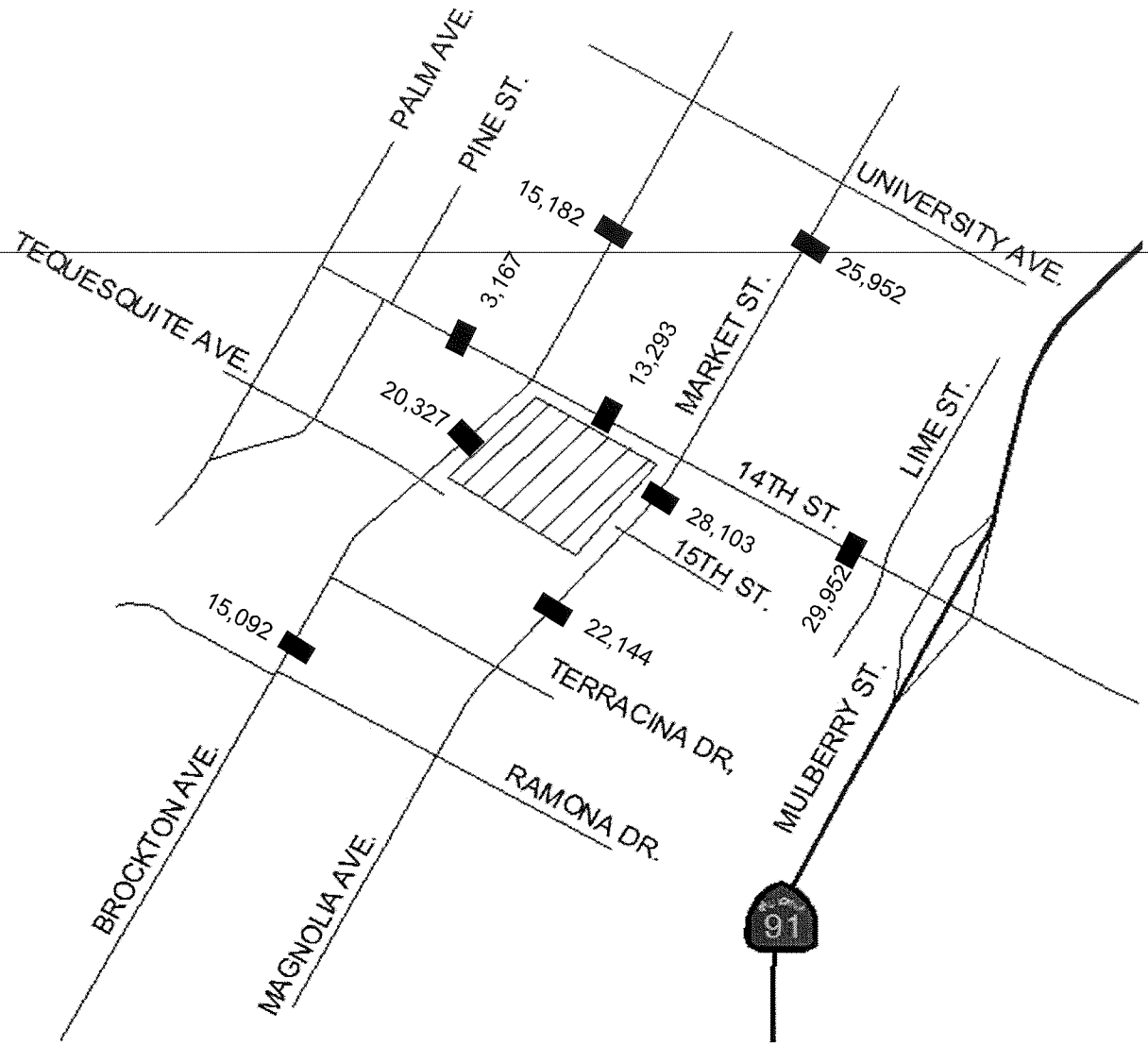
Figure 17

Year 2014 Cumulative Peak-Hour Traffic Volumes



Legend

■ X,XXX = Average Daily Traffic

NOT TO SCALE

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Figure 18

Year 2014 ADT Volumes

Intersection Analysis – Year 2014 Cumulative Conditions

Annual growth and traffic from the Cumulative Projects were added to the Existing traffic volumes to develop Year 2014 Cumulative Conditions without Project traffic forecasts, and the study intersections were reanalyzed. Intersection Level of Service worksheets are provided in ***Appendix D***. The Year 2014 Cumulative Conditions analysis results and Level of Service for the study intersections are presented in **Table 12**.

Review of this table shows that, with the addition of annual growth and Cumulative Projects traffic, all study intersections would operate at LOS D or better during both peak periods, with the exception of the following:

- 9. Brockton Avenue and the RCH Entrance: PM Peak – LOS F

This intersection was also shown to operate at LOS E during the PM peak hour under Existing Conditions.

Roadway Segment Analysis – Year 2014 Cumulative Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. The Year 2014 Cumulative Conditions analysis results and Level of Service for the study roadway segments are presented in **Table 13**. As shown in this table, all study roadway segments would operate at LOS D or better under Year 2014 Cumulative Conditions.

Year 2014 Cumulative Conditions Plus Project

Project-related traffic for the Phase I project (a new 189-bed hospital bed tower) was added to the Year 2014 Cumulative Conditions traffic volumes. The resulting peak hour turning movement volumes at the study intersections are shown on **Figure 19**, and daily roadway segment volumes are shown on **Figure 20**.

Intersection Analysis – Year 2014 Cumulative Conditions Plus Project

Year 2014 Cumulative Conditions Plus Project peak hour intersection operations are summarized on Table 12 (presented previously). With the addition of project traffic, the following study intersections would operate at an unacceptable Level of Service:

- 9. Brockton Avenue and the RCH Entrance: AM – LOS F, PM – LOS F

TABLE 12

SUMMARY OF INTERSECTION OPERATIONS - YEAR 2014 CUMULATIVE CONDITIONS

INTERSECTION		PEAK HOUR	2014 CUMULATIVE		2014 CUMULATIVE PLUS PROJECT		DIFFERENCE IN DELAY (c)	SIGNIFICANT?
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)		
1	Brockton Ave and University Ave	AM	23.8	C	24.8	C	1.0	NO
		PM	30.8	C	32.0	C	1.2	NO
2	Market St and University Ave	AM	26.7	C	27.9	C	1.2	NO
		PM	40.0	D	41.6	D	1.6	NO
3	Brockton Ave and 14th St	AM	31.8	C	36.5	D	4.7	NO
		PM	34.7	C	44.6	D	9.9	**YES**
4	14th St and RCH Entrance	AM	19.2	C	22.6	C	3.4	NO
		PM	13.9	B	30.4	D	16.5	**YES**
5	14th St and Market St/Magnolia Ave	AM	26.7	C	27.6	C	0.9	NO
		PM	44.1	D	49.1	D	5.0	**YES**
6	14th St and Lime St	AM	29.8	C	30.4	C	0.6	NO
		PM	48.1	D	50.2	D	2.1	NO
7	14th St and SR-91 WB Ramps	AM	19.6	B	21.2	C	1.6	NO
		PM	22.5	C	24.4	C	1.9	NO
8	14th St and SR-91 EB Ramps	AM	20.7	C	21.0	C	0.3	NO
		PM	18.9	B	19.1	B	0.2	NO
9	Brockton Ave and RCH Entrance	AM	33.4	D	84.6	**F**	51.2	**YES**
		PM	92.6	**F**	795.4	**F**	702.8	**YES**
10	Magnolia Ave and 15th/RCH	AM	10.9	B	11.4	B	0.5	NO
		PM	13.0	B	14.1	B	1.1	NO
11	Brockton Ave and Tequesquite Ave	AM	16.6	B	19.5	B	2.9	NO
		PM	21.5	C	22.3	C	0.8	NO
12	Brockton Ave and Terracina Dr	AM	5.0	A	5.2	A	0.2	NO
		PM	3.5	A	3.6	A	0.1	NO
13	Magnolia Ave and Terracina Dr	AM	18.8	B	18.9	B	0.1	NO
		PM	20.1	C	20.1	C	0.0	NO
14	Brockton Ave and Ramona Dr	AM	7.4	A	7.8	A	0.4	NO
		PM	5.0	A	5.2	A	0.2	NO
15	Magnolia Ave and Ramona Dr	AM	17.9	B	18.2	B	0.3	NO
		PM	11.5	B	11.8	B	0.3	NO

Notes:

Bold values indicate intersections operating at LOS E or F. **Bold and shaded** results indicate project significant impact.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a one-way stop-controlled intersection, delay refers to the movement with the highest delay.

(b) Delay values are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 8.0

(c) Change in delay due to addition of project traffic

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TABLE 13

SUMMARY OF ROADWAY OPERATIONS - YEAR 2014 CUMULATIVE CONDITIONS

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	LOS E CAPACITY	YEAR 2014		YEAR 2014 PLUS PROJECT		PROJECT TRAFFIC	SIGNIFICANT?
			ADT	LOS	ADT	LOS		
14th Street: West of Brockton Avenue	2-Lane Collector	12,500	3,167	B	3,240	B	73	NO
14th Street: Brockton Avenue to Magnolia Avenue	4-Lane Arterial (100')	33,000	13,293	B	14,320	B	1,027	NO
14th Street: Magnolia Avenue to Mulberry Avenue	4-Lane Arterial (100')	33,000	29,952	D	30,564	D	612	NO
Brockton Avenue: University Avenue to 14th Street	4-Lane Arterial (88')	22,000	15,182	C	15,549	C	367	NO
Brockton Avenue: 14th Street to Tequesquite Avenue	4-Lane Arterial (88')	22,000	20,327	D	21,428	D	1,101	NO
Brockton Avenue: Tequesquite Avenue to Ramona Drive	4-Lane Arterial (88')	22,000	15,092	C	15,704	C	612	NO
Market Street: University Avenue to 14th Street	4-Lane Arterial (110')	33,000	25,952	B	26,441	C	489	NO
Magnolia Avenue: 14th Street to 15th Street	4-Lane Arterial (100')	33,000	28,103	C	28,299	C	196	NO
Magnolia Avenue: 15th Street to Ramona Drive	4-Lane Arterial (100')	33,000	22,144	B	22,266	B	122	NO

Notes:
Bold values indicate roadway segments operating at LOS E or F. **Bold and shaded** results indicate a significant project impact

1

Brockton Avenue: 5 / 7 ⇦; 346 / 354 ⇩; 27 / 63 ⇨

University Avenue: 21 / 26 ⇦; 131 / 237 ⇧; 94 / 169 ⇨

3 / 2 ⇦; 191 / 273 ⇩; 255 / 231 ⇨

79 / 195 ⇦; 420 / 473 ⇧; 125 / 122 ⇨

2

Market Street: 52 / 93 ⇦; 1214 / 1210 ⇦; 93 / 241 ⇨

University Avenue: 98 / 92 ⇦; 199 / 318 ⇧; 82 / 124 ⇨

64 / 85 ⇦; 283 / 366 ⇩; 55 / 76 ⇨

43 / 92 ⇦; 548 / 997 ⇧; 90 / 193 ⇨

3

Brockton Avenue: 13 / 17 ⇦; 531 / 701 ⇩; 147 / 120 ⇨

14th Street: 82 / 147 ⇦; 59 / 116 ⇧; 364 / 377 ⇨

34 / 28 ⇦; 91 / 81 ⇩; 38 / 27 ⇨

18 / 20 ⇦; 649 / 508 ⇧; 281 / 402 ⇨

4

14th Street: 763 / 1226 ⇧; 20 / 14 ⇨

886 / 1014 ⇩; 28 / 7 ⇨

6 / 9 ⇦; 9 / 32 ⇨

5

Market/Magnolia: 137 / 125 ⇦; 574 / 981 ⇩; 105 / 128 ⇨

14th Street: 119 / 91 ⇦; 577 / 481 ⇧; 327 / 326 ⇨

96 / 148 ⇦; 411 / 593 ⇩; 52 / 98 ⇨

43 / 80 ⇦; 565 / 547 ⇧; 188 / 255 ⇨

6

Lime Street: 30 / 65 ⇦; 143 / 676 ⇩; 56 / 373 ⇨

14th Street: 310 / 84 ⇦; 1845 / 1072 ⇧; 416 / 409 ⇨

21 / 32 ⇦; 598 / 1001 ⇩; 112 / 230 ⇨

66 / 52 ⇦; 199 / 168 ⇧; 352 / 490 ⇨

7

SR-91 WB Ramps: 711 / 314 ⇦; 163 / 60 ⇩; 125 / 164 ⇨

14th Street: 1797 / 1268 ⇧; 285 / 312 ⇨

4 / 9 ⇦; 851 / 1567 ⇩; 128 / 280 ⇨

8

SR-91 EB Ramps: 173 / 108 ⇦; 1424 / 1071 ⇧

14th Street

441 / 533 ⇦; 510 / 1209 ⇩

679 / 518 ⇦; 2 / 3 ⇧; 99 / 379 ⇨

9

Brockton Avenue: 806 / 1271 ⇩; 68 / 29 ⇨

RCH Entrance: 41 / 82 ⇦; 14 / 25 ⇨

886 / 952 ⇧; 78 / 16 ⇨

10

Magnolia Avenue: 64 / 50 ⇦; 653 / 1411 ⇩; 51 / 72 ⇨

15th/RCH: 29 / 48 ⇦; 15 / 4 ⇧; 39 / 109 ⇨

26 / 55 ⇦; 5 / 23 ⇩; 16 / 35 ⇨

31 / 15 ⇦; 889 / 726 ⇧; 59 / 56 ⇨

11

Brockton Avenue: 114 / 173 ⇦; 482 / 1029 ⇩; 113 / 76 ⇨

Tequesquite: 43 / 166 ⇦; 7 / 30 ⇧; 46 / 163 ⇨

190 / 145 ⇦; 18 / 12 ⇩; 24 / 69 ⇨

53 / 44 ⇦; 737 / 504 ⇧; 99 / 45 ⇨

12

Brockton Avenue: 518 / 938 ⇩; 121 / 80 ⇨

Terracina Drive: 119 / 37 ⇦; 17 / 5 ⇨

780 / 479 ⇧; 52 / 19 ⇨

13

Magnolia Avenue: 86 / 83 ⇦; 480 / 926 ⇩; 178 / 351 ⇨

Terracina Drive: 23 / 80 ⇦; 11 / 24 ⇧; 15 / 53 ⇨

92 / 24 ⇦; 19 / 38 ⇩; 96 / 69 ⇨

87 / 55 ⇦; 576 / 596 ⇧; 87 / 177 ⇨

14

Brockton Avenue: 3 / 5 ⇦; 424 / 820 ⇩; 70 / 78 ⇨

Ramona Drive: 125 / 38 ⇦; 2 / 3 ⇧; 45 / 31 ⇨

5 / 4 ⇦; 2 / 2 ⇩; 8 / 5 ⇨

4 / 9 ⇦; 724 / 454 ⇧; 89 / 21 ⇨

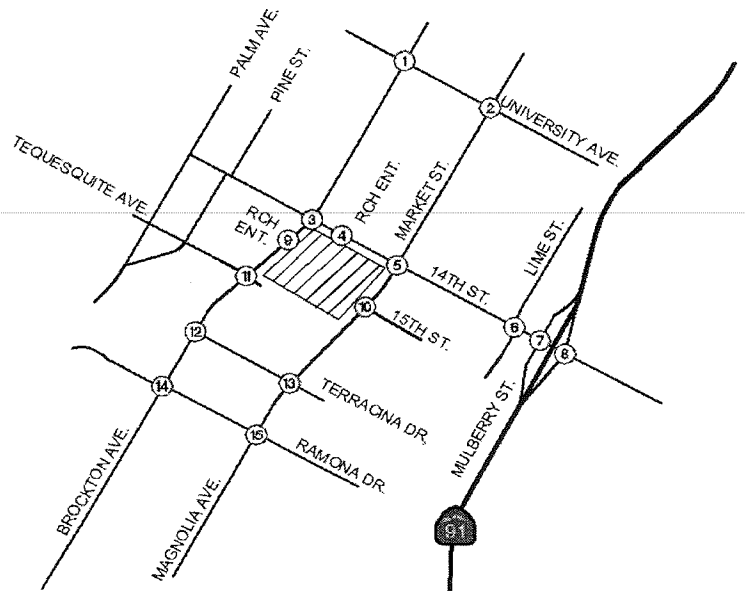
15

Magnolia Avenue: 98 / 18 ⇦; 427 / 915 ⇩; 49 / 68 ⇨

Ramona Drive: 53 / 59 ⇦; 96 / 32 ⇧; 32 / 56 ⇨

47 / 14 ⇦; 140 / 69 ⇩; 68 / 28 ⇨

96 / 21 ⇦; 893 / 895 ⇩; 132 / 107 ⇨



Legend

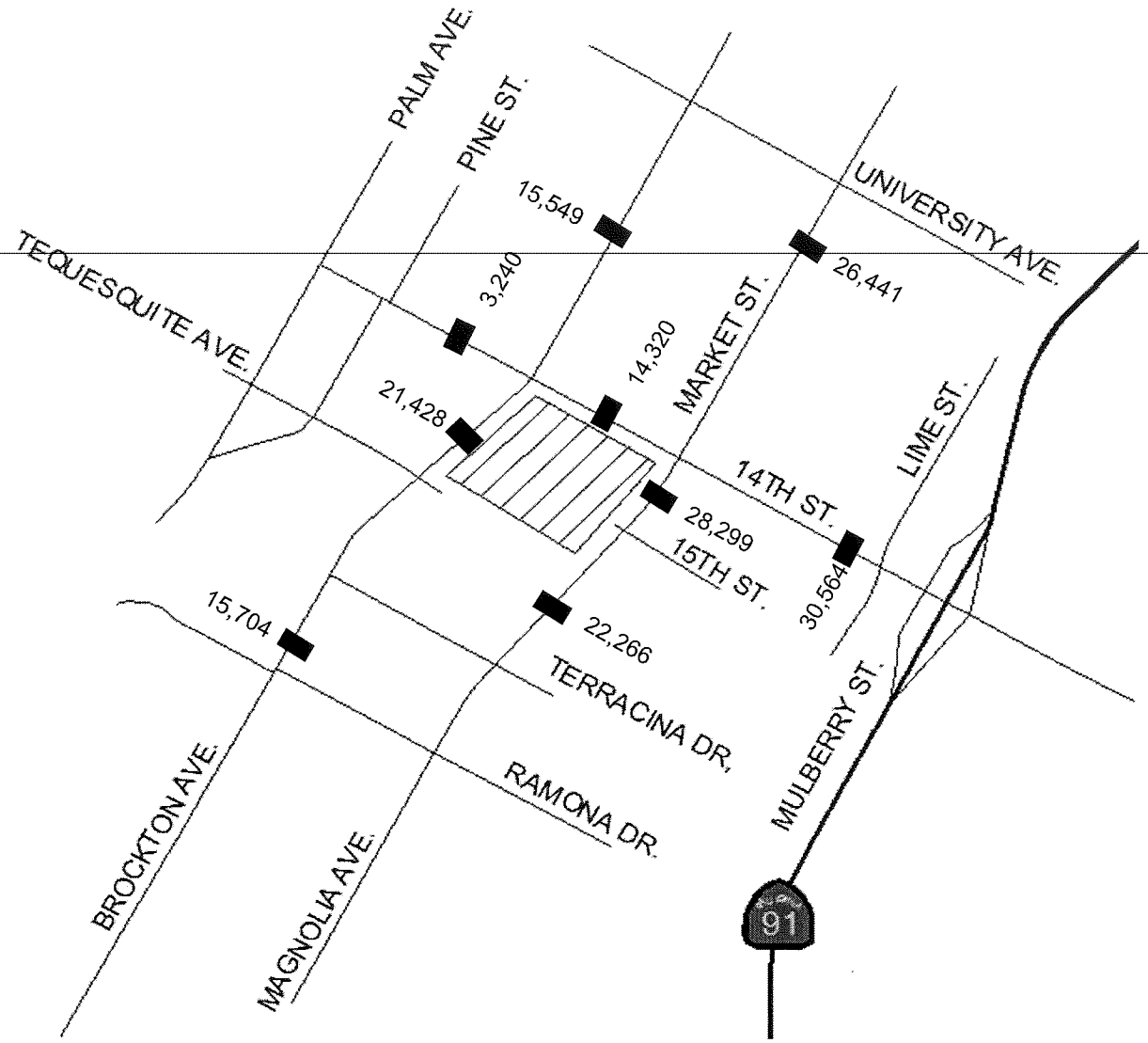
X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

Kimley-Horn and Associates, Inc.

Figure 19

Year 2014 Plus Project Peak-Hour Traffic Volumes



Legend

■ X,XXX = Average Daily Traffic

NOT TO SCALE

Kimley-Horn and Associates, Inc.

Figure 20

Year 2014 Plus Project ADT Volumes

K:\ORA_TPTO\ZSAC\Projects\Projects for Others\Riverside Hospital\2013 RCH TIA\Excel\[RCH_RS01.xlsm]ADT Fig (P)\Year 2014 Plus Project ADT Volumes

Based on the City of Riverside significance criteria described in the Analysis Methodology section of this report, the addition of project-related traffic would cause a significant impact at the following intersections:

- 3. Brockton Avenue and 14th Street
  - PM – LOS D: project impact 9.9 seconds
- 4. 14th Street and the RCH Entrance
  - PM – LOS D: project impact 16.5 seconds
- 5. 14th Street and Magnolia Avenue / Market Street
  - PM – LOS D: project impact 5.0 seconds
- 9. Brockton Avenue and the RCH Entrance
  - AM – LOS F: deficiency caused by the project
  - PM – LOS F: project impact 702.8 seconds

Roadway Analysis – Year 2014 Cumulative Conditions Plus Project

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. The Year 2014 Cumulative Conditions with Project analysis results and Level of Service for the study roadway segments are presented in **Table 13** (presented previously). As shown in this table, all study roadway segments would operate at LOS D or better under Year 2014 Cumulative Conditions Plus Project.

Build-out Conditions

This section provides a description of peak hour and daily traffic operating conditions at build-out of the City of Riverside and the surrounding area.

Build-out peak hour traffic forecasts were developed using forecast volumes from the Riverside Traffic Analysis Model (RIVTAM). RIVTAM link approach volumes were provided for Base Year 2007 and Build-out Year 2035.[4] Peak hour turning movement volumes for Build-out Conditions were developed from these RIVTAM approach forecasts using the B-Turns software, developed by the Federal Highway Administration (FHWA). B-Turns worksheets are provided in ***Appendix E***.

Resulting Build-out peak hour turning movement volumes at the study intersections are shown on **Figure 21.** Build-out ADT roadway segment volumes are shown on **Figure 22.**

Intersection Analysis – Build-out Conditions

Using the Build-out peak hour forecasts developed from the RIVTAM link volumes, the study intersections were reanalyzed. Intersection Level of Service worksheets are provided in ***Appendix D***. The Build-out Conditions analysis results and Level of Service for the study intersections are presented in **Table 14**.

Review of this table shows that the following study intersections would operate at an unacceptable Level of Service under Build-out Conditions:

- 5. 14th Street and Magnolia / Market Street: PM Peak – LOS E
- 6. 14th Street and Lime Street: AM Peak – LOS E; PM Peak – LOS F
- 9. Brockton Avenue and the RCH Entrance: PM Peak – LOS F

All other study intersections would operate at an acceptable Level of Service D or better in both peak hours.

Roadway Segment Analysis – Build-out Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. The Build-out Conditions analysis results and Level of Service for the study roadway segments are presented in **Table 15**.

As shown in this table, the following roadway segments would carry daily traffic volumes in excess of their daily capacity:

- 14th Street: Magnolia Avenue / Market Street to Mulberry Avenue – LOS F
- Brockton Avenue: 14th Street to Tequesquite Avenue – LOS F

[4] The County of Riverside Traffic Analysis Model (RIVTAM) forecasts represent full build-out of the General Plan land uses and transportation infrastructure throughout the region. The Base Year 2007 model represents the year that the model was calibrated for Baseline conditions. For planning purposes, the County currently labels the Build-out Conditions RIVTAM Model as Year 2035 Build-out.

1

Brockton Avenue: 26 / 26 ⇦, 469 / 565 ⇩, 53 / 91 ⇨
University Avenue: 42 / 54 ⇨, 230 / 374 ⇧, 45 / 115 ⇦
13 / 10 ⇨, 248 / 403 ⇩, 250 / 399 ⇦
49 / 237 ⇨, 312 / 697 ⇧, 27 / 55 ⇨

2

Market Street: 29 / 105 ⇦, 1373 / 1441 ⇩, 25 / 136 ⇨
University Avenue: 29 / 57 ⇨, 240 / 312 ⇧, 138 / 105 ⇦
31 / 139 ⇨, 218 / 499 ⇩, 150 / 202 ⇦
153 / 197 ⇦, 539 / 1459 ⇧, 111 / 200 ⇨

3

Brockton Avenue: 17 / 6 ⇦, 608 / 788 ⇩, 184 / 157 ⇨
14th Street: 110 / 209 ⇨, 69 / 48 ⇧, 201 / 384 ⇦
46 / 59 ⇨, 107 / 189 ⇩, 36 / 49 ⇦
14 / 5 ⇦, 653 / 608 ⇧, 201 / 284 ⇨

4

14th Street: 718 / 1318 ⇧, 3 / 6 ⇦
960 / 1243 ⇩, 17 / 1 ⇦
1 / 0 ⇨, 3 / 17 ⇨

5

Market/Magnolia: 111 / 149 ⇦, 817 / 1430 ⇩, 77 / 211 ⇨
14th Street: 84 / 195 ⇨, 557 / 571 ⇧, 443 / 428 ⇦
88 / 146 ⇨, 399 / 553 ⇩, 114 / 112 ⇦
83 / 95 ⇨, 778 / 1174 ⇧, 232 / 340 ⇨

6

Lime Street: 32 / 60 ⇦, 247 / 851 ⇩, 107 / 532 ⇨
14th Street: 448 / 185 ⇨, 1582 / 1351 ⇧, 597 / 719 ⇦
22 / 38 ⇨, 666 / 1035 ⇩, 114 / 214 ⇦
49 / 63 ⇨, 260 / 365 ⇧, 502 / 970 ⇨

7

SR-91 WB Ramps: 918 / 539 ⇦, 140 / 78 ⇩, 121 / 198 ⇨
14th Street: 1695 / 1738 ⇧, 180 / 322 ⇦
1098 / 2105 ⇩, 148 / 408 ⇦

8

SR-91 EB Ramps
14th Street: 216 / 156 ⇨, 1300 / 1492 ⇧
377 / 743 ⇨, 810 / 1572 ⇩
575 / 562 ⇨, 2 / 3 ⇧, 216 / 399 ⇨

9

Brockton Avenue: 730 / 1378 ⇩, 20 / 3 ⇨
RCH Entrance: 20 / 23 ⇨, 11 / 25 ⇦
806 / 1030 ⇧, 71 / 15 ⇨

10

Magnolia Avenue: 96 / 74 ⇦, 1084 / 1550 ⇩, 97 / 270 ⇨
15th/RCH: 64 / 174 ⇨, 16 / 5 ⇧, 101 / 388 ⇦
39 / 56 ⇨, 5 / 43 ⇩, 28 / 37 ⇦
40 / 30 ⇨, 1155 / 1161 ⇧, 102 / 313 ⇨

11

Brockton Avenue: 74 / 182 ⇦, 509 / 1217 ⇩, 17 / 18 ⇨
Tequesquite: 6 / 104 ⇨, 3 / 17 ⇧, 31 / 97 ⇦
184 / 166 ⇨, 12 / 6 ⇩, 76 / 74 ⇦
112 / 65 ⇨, 743 / 918 ⇧, 59 / 19 ⇨

12

Brockton Avenue: 563 / 1118 ⇩, 58 / 44 ⇨
Terracina Drive: 72 / 24 ⇨, 59 / 5 ⇦
779 / 911 ⇧, 116 / 27 ⇨

13

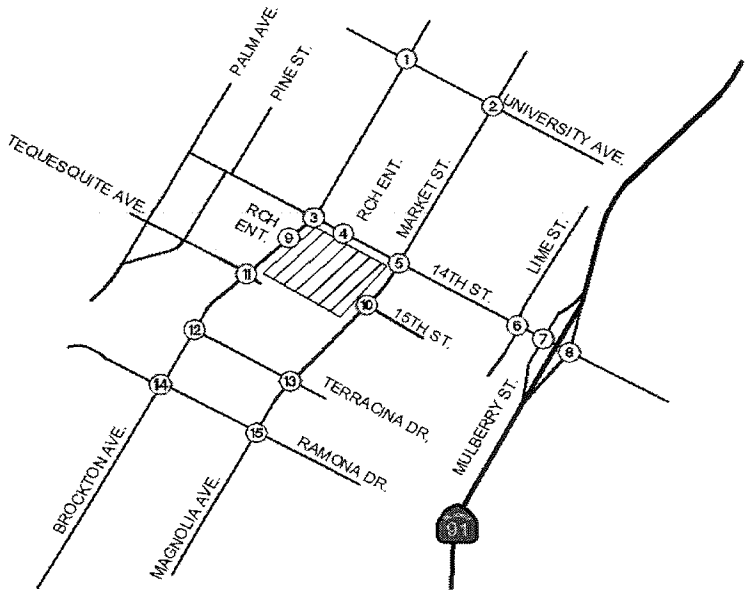
Magnolia Avenue: 97 / 98 ⇦, 918 / 789 ⇩, 203 / 388 ⇨
Terracina Drive: 27 / 143 ⇨, 2 / 27 ⇧, 21 / 51 ⇦
109 / 39 ⇨, 13 / 31 ⇩, 115 / 38 ⇦
72 / 40 ⇨, 942 / 714 ⇧, 98 / 153 ⇨

14

Brockton Avenue: 2 / 9 ⇦, 507 / 1133 ⇩, 67 / 308 ⇨
Ramona Drive: 106 / 265 ⇨, 2 / 4 ⇧, 81 / 36 ⇦
3 / 8 ⇨, 2 / 2 ⇩, 10 / 2 ⇦
5 / 4 ⇨, 732 / 959 ⇧, 155 / 21 ⇨

15

Magnolia Avenue: 149 / 52 ⇦, 738 / 1336 ⇩, 135 / 106 ⇨
Ramona Drive: 107 / 156 ⇨, 103 / 170 ⇧, 43 / 166 ⇦
64 / 46 ⇨, 182 / 247 ⇩, 58 / 70 ⇦
58 / 66 ⇨, 1047 / 1613 ⇧, 158 / 223 ⇨



Legend

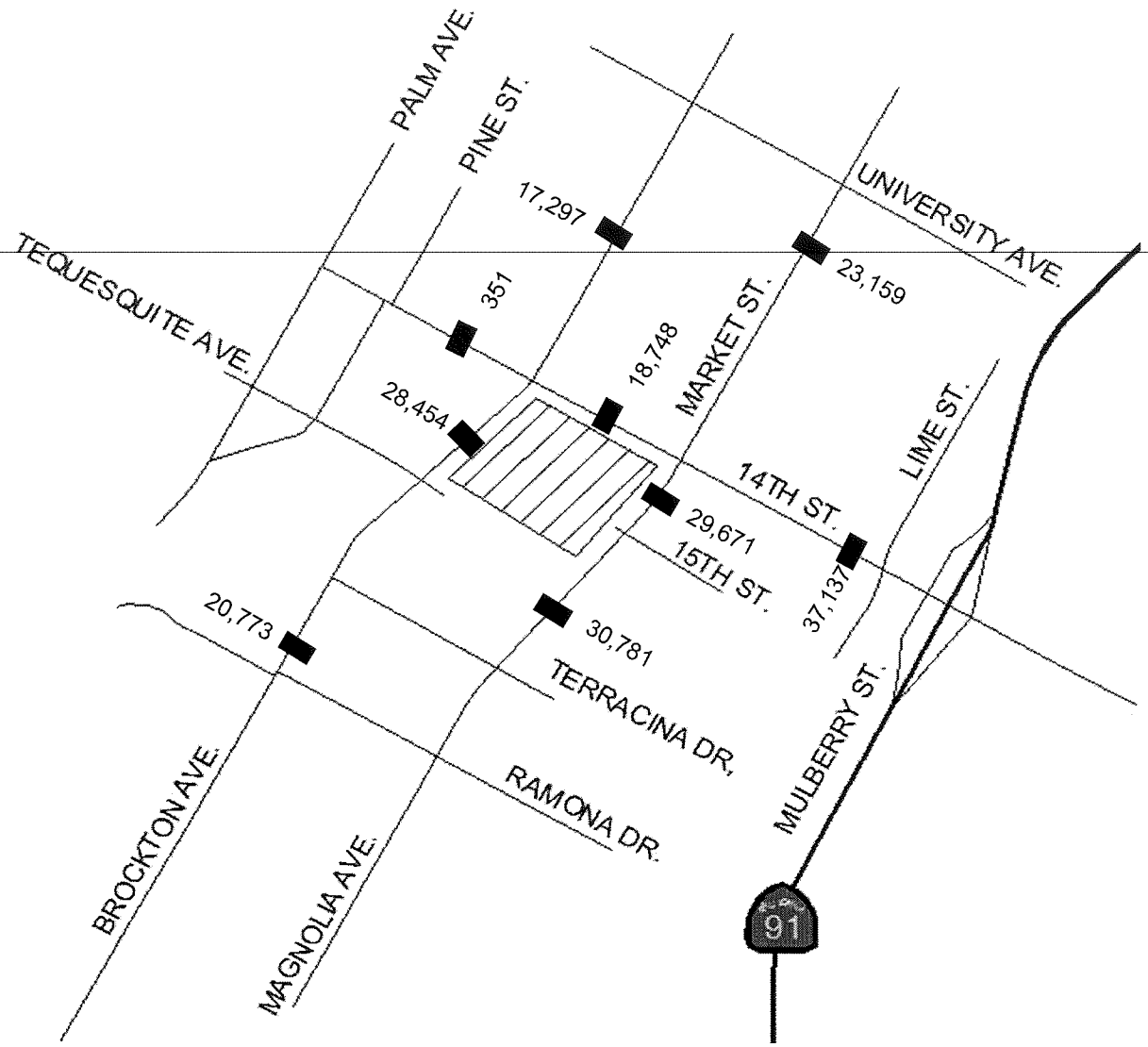
X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

Kimley-Horn and Associates, Inc.

Figure 21

Build-Out Peak-Hour Traffic Volumes



Legend

■ X,XXX = Average Daily Traffic

NOT TO SCALE

Kimley-Horn and Associates, Inc.

Figure 22

Build-out ADT Volumes

TABLE 14

SUMMARY OF INTERSECTION OPERATIONS - BUILD-OUT CONDITIONS

INTERSECTION		PEAK HOUR	BUILD-OUT		BUILD-OUT PLUS PROJECT			
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DELAY (c)	SIGNIFICANT?
1	Brockton Ave and University Ave	AM	20.4	C	22.2	C	1.8	NO
		PM	44.2	D	48.4	D	4.2	NO
2	Market St and University Ave	AM	21.8	C	23.1	C	1.3	NO
		PM	34.7	C	35.9	D	1.2	NO
3	Brockton Ave and 14th St	AM	22.6	C	28.4	C	5.8	NO
		PM	37.9	D	52.5	D	14.6	**YES**
4	14th St and RCH Entrance	AM	13.7	B	15.4	C	1.7	NO
		PM	13.7	B	23.1	C	9.4	**YES**
5	14th St and Market St/Magnolia Ave	AM	30.9	C	33.0	C	2.1	NO
		PM	55.5	**E**	61.6	**E**	6.1	**YES**
6	14th St and Lime St	AM	60.1	**E**	60.6	**E**	0.5	NO
		PM	217.5	**F**	223.5	**F**	6.0	**YES**
7	14th St and SR-91 WB Ramps	AM	17.7	B	19.3	B	1.6	NO
		PM	30.8	C	38.4	D	7.6	NO
8	14th St and SR-91 EB Ramps	AM	15.9	B	15.9	B	0.0	NO
		PM	24.8	C	26.9	C	2.1	NO
9	Brockton Ave and RCH Entrance	AM	18.5	C	25.8	D	7.3	**YES**
		PM	48.6	**E**	268.2	**F**	219.6	**YES**
10	Magnolia Ave and 15th/RCH	AM	10.0	B	10.5	B	0.5	NO
		PM	42.6	D	46.8	D	4.2	NO
11	Brockton Ave and Tequesquite Ave	AM	11.2	B	13.5	B	2.3	NO
		PM	18.1	B	22.6	C	4.5	NO
12	Brockton Ave and Terracina Dr	AM	4.8	A	5.0	A	0.2	NO
		PM	2.9	A	3.1	A	0.2	NO
13	Magnolia Ave and Terracina Dr	AM	17.9	B	18.1	B	0.2	NO
		PM	20.1	C	20.2	C	0.1	NO
14	Brockton Ave and Ramona Dr	AM	5.1	A	5.3	A	0.2	NO
		PM	5.3	A	6.3	A	1.0	NO
15	Magnolia Ave and Ramona Dr	AM	12.1	B	12.3	B	0.2	NO
		PM	23.0	C	23.1	C	0.1	NO

Notes:

Bold values indicate intersections operating at LOS E or F. **Bold and shaded** results indicate project significant impact.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 8.0

(c) Change in delay due to addition of project traffic

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TABLE 15

SUMMARY OF ROADWAY OPERATIONS - BUILD-OUT CONDITIONS

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	LOS E CAPACITY	BUILD-OUT		BUILD-OUT PLUS PROJECT		PROJECT TRAFFIC	SIGNIFICANT?
			ADT	LOS	ADT	LOS		
14th Street: West of Brockton Avenue	2-Lane Collector	12,500	351	B	524	B	173	NO
14th Street: Brockton Avenue to Magnolia Avenue	4-Lane Arterial (100')	33,000	18,748	B	21,174	B	2,426	NO
14th Street: Magnolia Avenue to Mulberry Avenue	4-Lane Arterial (100')	33,000	37,137	**F**	38,581	**F**	1,444	**YES**
Brockton Avenue: University Avenue to 14th Street	4-Lane Arterial (88')	22,000	17,297	C	18,164	C	867	NO
Brockton Avenue: 14th Street to Tequesquite Avenue	4-Lane Arterial (88')	22,000	28,454	**F**	31,054	**F**	2,600	**YES**
Brockton Avenue: Tequesquite Avenue to Ramona Drive	4-Lane Arterial (88')	22,000	20,773	D	22,217	**F**	1,444	**YES**
Market Street: University Avenue to 14th Street	4-Lane Arterial (110')	33,000	23,159	B	24,314	B	1,155	NO
Magnolia Avenue: 14th Street to 15th Street	4-Lane Arterial (100')	33,000	29,671	D	30,133	D	462	NO
Magnolia Avenue: 15th Street to Ramona Drive	4-Lane Arterial (100')	33,000	30,781	D	31,070	D	289	NO

Notes:
Bold values indicate roadway segments operating at LOS E or F. **Bold and shaded** results indicate a significant project impact

Build-out Plus Project Conditions

Project-related traffic for the Riverside Community Hospital Specific Plan Expansion Project was added to the Build-out Conditions traffic volumes. The resulting peak hour traffic volumes at the study intersections are shown on **Figure 23**, and daily roadway segment volumes are shown on **Figure 24**.

Intersection Analysis – Build-out Plus Project Conditions

Build-out Plus Project Conditions peak hour intersection operations are summarized on Table 14 (presented previously). With the addition of project traffic, the following study intersections would operate at an unacceptable Level of Service:

- 5. 14th Street and Magnolia / Market Street: PM Peak – LOS E
- 6. 14th Street and Lime Street: AM Peak – LOS E; PM Peak – LOS F
- 9. Brockton Avenue and the RCH Entrance: PM Peak – LOS F

Based on the City of Riverside significance criteria described in the Analysis Methodology section of this report, the addition of project-related traffic would cause a significant impact at the following intersections:

- 3. Brockton Avenue and 14th Street:
  - AM – LOS D: project impact 14.6 seconds
- 4. 14th Street and RCH Entrance
  - PM – LOS C: project impact 9.4 seconds
- 5. 14th Street and Magnolia / Market Street:
  - PM – LOS E: project impact 6.1 seconds
- 6. 14th Street and Lime Street:
  - PM – LOS F: project impact 6.0 seconds
- 9. Brockton Avenue and the RCH Entrance:
  - AM – LOS D: project impact 7.3 seconds
  - PM – LOS F: project impact 219.6 seconds

Roadway Analysis – Build-out Plus Project Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. The Build-out Plus Project Conditions analysis results and Level of Service for the study roadway segments are presented in Table 15 (presented previously). As shown in this table, with the addition of project traffic, the following roadway segments would operate at a deficient Level of Service.

- 14th Street: Magnolia Avenue to Mulberry Avenue – LOS F
- Brockton Avenue: 14th Street to Tequesquite Avenue – LOS F
- Brockton Avenue: Tequesquite Avenue to Ramona Drive – LOS F

These roadways are constructed to their ultimate General Plan configurations, and are not planned to be widened beyond their current classification.

1

Brockton Avenue: 26 / 26 ⇦, 503 / 583 ⇩, 53 / 91 ⇙
University Avenue: 42 / 54 ⇖, 230 / 374 ⇧, 45 / 115 ⇗
13 / 10 ⇖, 248 / 403 ⇩, 267 / 408 ⇙
55 / 256 ⇖, 325 / 735 ⇧, 27 / 55 ⇗

2

Market Street: 29 / 105 ⇦, 1390 / 1450 ⇩, 25 / 136 ⇙
University Avenue: 29 / 57 ⇖, 240 / 312 ⇧, 155 / 114 ⇗
31 / 139 ⇖, 218 / 499 ⇩, 167 / 211 ⇙
159 / 216 ⇖, 545 / 1478 ⇧, 117 / 219 ⇗

3

Brockton Avenue: 17 / 6 ⇦, 642 / 806 ⇩, 201 / 166 ⇙
14th Street: 116 / 228 ⇖, 69 / 48 ⇧, 292 / 432 ⇗
46 / 59 ⇖, 107 / 189 ⇩, 46 / 54 ⇙
18 / 17 ⇖, 666 / 646 ⇧, 235 / 388 ⇗

4

14th Street: 809 / 1366 ⇧, 37 / 24 ⇗
994 / 1347 ⇩, 34 / 10 ⇙
7 / 19 ⇖, 16 / 55 ⇗

5

Market/Magnolia: 162 / 175 ⇦, 834 / 1439 ⇩, 77 / 211 ⇙
14th Street: 84 / 195 ⇖, 631 / 610 ⇧, 453 / 433 ⇗
107 / 204 ⇖, 427 / 637 ⇩, 114 / 112 ⇙
83 / 95 ⇖, 784 / 1193 ⇧, 236 / 352 ⇗

6

Lime Street: 32 / 60 ⇦, 247 / 851 ⇩, 107 / 532 ⇙
14th Street: 448 / 185 ⇖, 1639 / 1381 ⇧, 597 / 719 ⇗
22 / 38 ⇖, 687 / 1100 ⇩, 118 / 226 ⇙
59 / 68 ⇖, 260 / 365 ⇧, 502 / 970 ⇗

7

SR-91 WB Ramps: 935 / 548 ⇦, 140 / 78 ⇩, 121 / 198 ⇙
14th Street: 1735 / 1759 ⇧, 180 / 322 ⇗
6 / 19 ⇖, 1113 / 2151 ⇩, 148 / 408 ⇙

8

SR-91 EB Ramps: 216 / 156 ⇖, 1324 / 1504 ⇧
14th Street
383 / 762 ⇖, 819 / 1599 ⇩
592 / 571 ⇖, 2 / 3 ⇧, 216 / 399 ⇖

9

Brockton Avenue: 781 / 1404 ⇩, 104 / 47 ⇙
RCH Entrance: 51 / 119 ⇖, 17 / 44 ⇙
825 / 1088 ⇧, 88 / 24 ⇗

10

Magnolia Avenue: 123 / 88 ⇦, 1084 / 1550 ⇩, 97 / 270 ⇙
15th/RCH: 64 / 174 ⇖, 23 / 9 ⇧, 101 / 388 ⇗
49 / 87 ⇖, 8 / 51 ⇩, 34 / 56 ⇙
57 / 39 ⇖, 1155 / 1161 ⇧, 102 / 313 ⇗

11

Brockton Avenue: 74 / 182 ⇦, 515 / 1236 ⇩, 68 / 44 ⇙
Tequesquite: 25 / 162 ⇖, 9 / 36 ⇧, 56 / 174 ⇗
184 / 166 ⇖, 29 / 15 ⇩, 76 / 74 ⇙
112 / 65 ⇖, 760 / 927 ⇧, 126 / 54 ⇗

12

Brockton Avenue: 588 / 1195 ⇩, 64 / 63 ⇙
Terracina Drive: 89 / 33 ⇖, 59 / 5 ⇙
846 / 946 ⇩, 116 / 27 ⇗

13

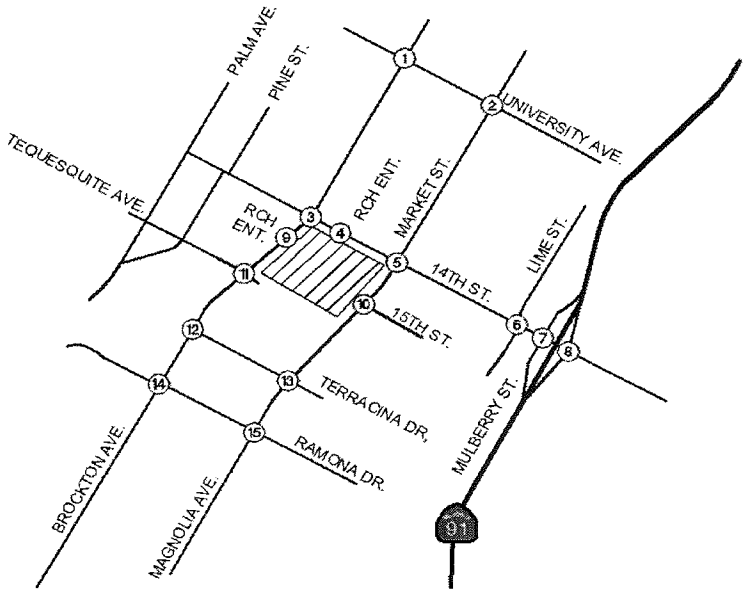
Magnolia Avenue: 97 / 98 ⇦, 924 / 808 ⇩, 203 / 388 ⇙
Terracina Drive: 27 / 143 ⇖, 19 / 36 ⇧, 21 / 51 ⇗
109 / 39 ⇖, 19 / 50 ⇩, 115 / 38 ⇙
72 / 40 ⇖, 959 / 723 ⇧, 98 / 153 ⇗

14

Brockton Avenue: 2 / 9 ⇦, 526 / 1191 ⇩, 73 / 327 ⇙
Ramona Drive: 123 / 274 ⇖, 2 / 4 ⇧, 81 / 36 ⇗
3 / 8 ⇖, 2 / 2 ⇩, 10 / 2 ⇙
5 / 4 ⇖, 783 / 985 ⇧, 155 / 21 ⇗

15

Magnolia Avenue: 149 / 52 ⇦, 744 / 1355 ⇩, 135 / 106 ⇙
Ramona Drive: 107 / 156 ⇖, 103 / 170 ⇧, 43 / 166 ⇗
64 / 46 ⇖, 182 / 247 ⇩, 64 / 89 ⇙
75 / 75 ⇖, 1066 / 1622 ⇧, 158 / 223 ⇗



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

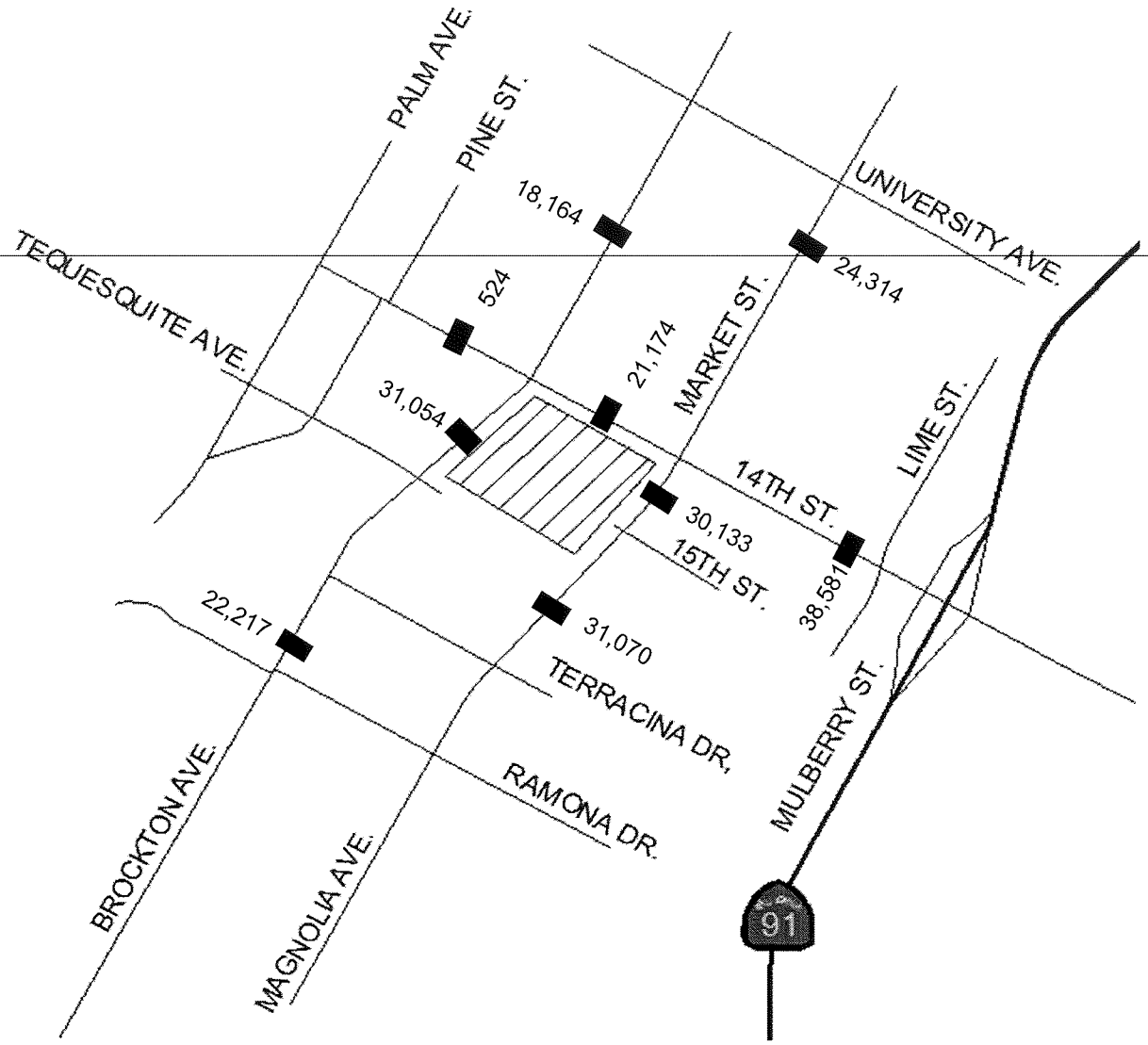
NOT TO SCALE

Kimley-Horn and Associates, Inc.

Figure 23

Build-Out Plus Project Peak-Hour Traffic Volumes

K:\ORA_TPTO\ZSAC\Projects\Projects for Others\Riverside Hospital\2013 RCH TIA\Excel\[RCH_TA01 REV2.xlsm]HYWP Figure 1-16



Legend

■ X,XXX = Average Daily Traffic

NOT TO SCALE

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Figure 24

Build-out Plus Project ADT Volumes

SIGNAL WARRANT ANALYSIS

A traffic signal warrant analysis was conducted for the unsignalized intersections of 14th Street and the RCH Entrance, and Brockton Avenue and the RCH Entrance. The warrants were conducted using Warrant 3 (Peak Hour Warrant) for Existing and Future Conditions. The signal warrant analysis methodology is based on the 2010 California Manual on Uniform Traffic Control Devices (MUTCD). Signal warrant analysis was conducted for the Existing, Year 2014 Cumulative with Project, and Build-out with Project Conditions. Traffic signal warrant analysis worksheets are provided in ***Appendix F***.

The Peak Hour Warrant, is met when either of the following two parts is met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
   1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
   2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
   3. The total entering volume serviced during the hour equals or exceeds 800 vehicles per hour for intersections with four or more approaches.

B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-4 for the existing combination of approach lanes.

The chart below shows the results of the signal warrant analysis.

Intersection	Existing Conditions	Year 2014 Cumulative Plus Project Conditions	Build-out Plus Project Conditions
14th Street and RCH Entrance	Not Satisfied	Not Satisfied	Not Satisfied
Brockton Ave. and RCH Entrance	Not Satisfied	Satisfied	Satisfied

The intersection of 14th Street and the RCH Entrance would not meet the minimum signal warrant thresholds under any of the scenarios, indicating that the volumes of traffic leaving the Hospital campus via this entrance would not be high enough to warrant signalization. The intersection of Brockton Avenue and the RCH Entrance would meet the minimum threshold for the Peak Hour warrant for Year 2014 and Build-out Conditions, because traffic volumes forecasted to leave the Hospital via the unsignalized driveway on Brockton Avenue would be high enough for at least one hour during the day.

The MUTCD makes it clear that satisfaction of a signal warrant shall not, in and of itself, require the installation of a traffic signal. Any delay experienced at this driveway would be internal to the site for outbound traffic, and would not impact traffic flow on the public street. In addition, in the case of the RCH unsignalized entrance on Brockton Avenue, the forecast volumes at this RCH Entrance are based on trip assignment assumptions made for the purpose of this analysis. In reality, at such point in time that the delay for outbound vehicles at this intersection becomes unacceptable, Hospital employees and regular visitors would likely re-adjust their driving patterns to other entrances, including the signalized Tequesquite Avenue intersection, to avoid long delays during the peak hour. Intersection operation should be monitored as the Riverside Community Hospital Specific Plan Expansion Project and other area development comes on-line, and the need for a traffic signal should be determined based on actual operating conditions.

PROJECT IMPACT MITIGATION

The significance of the project traffic impact was determined based on the City of Riverside Level of Service Standard presented at the beginning of this report. The following summarizes the project's significant impacts based on these criteria, and the recommended improvements to mitigate the project's impacts.

Phase I Mitigation

Intersection Mitigation

Based on the City of Riverside significance criteria described in the Level of Service Standard section of this report, the addition of Phase I project-related traffic would cause a significant impact at the following intersections:

- 3. Brockton Avenue and 14th Street
  - PM – LOS D: project impact 9.9 seconds
- 4. 14th Street and the RCH Entrance
  - PM – LOS D: project impact 16.5 seconds
- 5. 14th Street and Magnolia Avenue / Market Street
  - PM – LOS D: project impact 5.0 seconds
- 9. Brockton Avenue and the RCH Entrance
  - AM – LOS F: deficiency caused by the project
  - PM – LOS F: project impact 702.8 seconds

The following discussion provides recommended mitigation measures to reduce the project impact to a less-than-significant level. The resulting delay and Level of Service with mitigation are summarized on **Table 16**. These mitigation measures would be required prior to completion of Phase I.

TABLE 16
SUMMARY OF INTERSECTION OPERATIONS WITH MITIGATION

	INTERSECTION	PEAK HOUR	2014 CUMULATIVE PLUS PROJECT		2014 CUMULATIVE PLUS PROJECT WITH MITIGATION	
			DELAY	LOS	DELAY	LOS
3	**Brockton Ave and 14th St** Convert one westbound through lane to a second left-turn lane.	PM	44.6	D	24.5	C
4	**14th St and RCH Entrance** No improvement recommended Intersection does not meet signal warrant PM Level of Service will remain at LOS D. Vehicle delay will occur on RCH site only.	PM	30.4	D	30.4	D
5	**14th St and Market St/Magnolia Ave** Modify the signal operation to provide right-turn overlap for the northbound approach.	PM	49.1	D	43.8	D
9	**Brockton Ave and RCH Entrance** Modify the driveway to prohibit westbound left-turn movements.	PM	795.4	F	17.1	C

	INTERSECTION	PEAK HOUR	BUILD-OUT PLUS PROJECT		BUILD-OUT PLUS PROJECT WITH MITIGATION	
			DELAY	LOS	DELAY	LOS
3	**Brockton Ave and 14th St** Convert one westbound through lane to a second left-turn lane.	PM	52.5	D	34.5	C
4	**14th St and RCH Entrance** No improvement recommended Intersection does not meet signal warrant PM Level of Service will remain at LOS C. Vehicle delay will occur on RCH site only.	PM	23.1	C	23.1	C
5	**14th St and Market St/Magnolia Ave** Provide a second westbound left-turn lane. Modify signal operation to provide right-turn overlap for the northbound approach.	PM	61.6	E	45.8	D
6	**14th St and Lime St** Convert northbound thru/right into a right-turn lane, modify signal operation to provide right-turn overlap for the northbound approach.	PM	223.5	F	81.7	F
9	**Brockton Ave and RCH Entrance** Modify the driveway to prohibit westbound left-turn movements.	PM	268.2	F	15.1	C

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- 3. Brockton Avenue and 14th Street: Although the evening peak hour Level of Service D is an acceptable Level of Service, by the City Level of Service Standard, the increase in delay of more than 5.0 seconds would be considered a significant project impact. The recommended mitigation would be to convert the number one westbound through lane to a second left-turn lane. With this mitigation, the intersection Level of Service would improve to LOS C in the evening peak hour.

- 4. 14th Street and the RCH Entrance: Although the evening peak hour Level of Service D is an acceptable Level of Service, by the City's impact significance standard, the increase in delay at this intersection would be considered a significant impact. The intersection does not satisfy the signal warrant. The intersection will continue to operate at LOS D as an unsignalized intersection, and any back-up as a result of the peak hour delay will be contained completely on the project site. It is recommended that no improvement to this intersection is required.

- 5. 14th Street and Magnolia Avenue / Market Street: Similarly, although the Level of Service D is an acceptable Level of Service, by the City Level of Service Standard, the increase in delay of more than 5.0 seconds would be considered a significant impact. Modifying the signal to provide right-turn overlap on the northbound leg will provide a slight improvement in the overall delay at the intersection for Year 2014 Plus Phase I Project Conditions.

- 9. Brockton Avenue and the RCH Entrance: It is recommended that the driveway be modified to prohibit outbound (westbound) left-turn movements, to reduce delay. Left-turning traffic will shift to the signalized intersection of Brockton Avenue at Tequesquite Avenue. With this mitigation measure in place, the intersection of Brockton Avenue and the RCH Entrance would improve to LOS C, and the intersection of Brockton Avenue at Tequesquite Avenue would continue to operate at an acceptable Level of Service.

Phase II Mitigation

Intersection Mitigation

Build-out conditions represent the future build-out of the City land uses and infrastructure, in accordance with the General Plan, as well as completion of Phase II of the Riverside Community Hospital Specific Plan Expansion Project. Based on the City of Riverside significance criteria described in the Level of Service Standard section of this report, the addition of Phase II project-related traffic would cause a significant impact at the following intersections:

- 3. Brockton Avenue and 14th Street:
  - AM – LOS D: project impact 14.6 seconds
- 4. 14th Street and RCH Entrance
  - PM – LOS C: project impact 9.4 seconds
- 5. 14th Street and Magnolia / Market Street:
  - PM – LOS E: project impact 6.1 seconds
- 6. 14th Street and Lime Street:
  - PM – LOS F: project impact 6.0 seconds
- 9. Brockton Avenue and the RCH Entrance:
  - AM – LOS D: project impact 7.3 seconds
  - PM – LOS F: project impact 219.6 seconds

The following discussion provides recommended mitigation measures to reduce the project impact to a less-than-significant level. The resulting delay and Level of Service with mitigation are summarized on Table 16 (previously presented). These mitigation measures would be required prior to completion of Phase II.

- 3. Brockton Avenue and 14th Street: Although the evening peak hour Level of Service D is an acceptable Level of Service, by the City Level of Service Standard, the increase in delay of more than 5.0 seconds would be considered a significant project impact. The recommended mitigation would be to convert the number one westbound through lane to a second left-turn lane. With this mitigation, the intersection Level of Service would improve to LOS C in the evening peak hour.

- 4. 14th Street and the RCH Entrance: Although the evening peak hour Level of Service C is an acceptable Level of Service, by the City's impact significance standard, the increase in delay at this intersection would be considered a significant impact. The intersection does not satisfy the signal warrant. The intersection will continue to operate at LOS C as an unsignalized intersection, and any back-up as a result of the peak hour delay will be contained completely on the project site. It is recommended that no improvement to this intersection is required.

- 5. 14th Street and Magnolia Avenue / Market Street: This intersection was forecasted to operate at LOS E in the evening peak hour without the project traffic, and the project's impact of an additional 6.1 seconds of delay is considered significant in accordance with the City's Level of Service standard. The recommended mitigation would be to provide a second westbound left-turn lane, and a northbound right-turn lane with overlap. With this mitigation, the intersection Level of Service would improve to LOS D in the evening peak hour.

- 6. 14th Street and Lime Street: This intersection was forecasted to operate at LOS F without the project traffic, with a very high level of delay in the PM peak hour. The project's impact of an additional 6.0 seconds of delay is considered significant in accordance with the City's Level of Service standard. The recommended mitigation would be to modify the northbound approach to convert the shared through/right-turn lane to a second exclusive right-turn lane, to accommodate the heavy right-turn movement toward the freeway. With this mitigation, the intersection will still operate at LOS F, but with a much improved level of delay compared to the pre-project condition.

- 9. Brockton Avenue and the RCH Entrance: The recommended mitigation is the same as shown for the Year 2014 conditions; the driveway would be modified to prohibit outbound (westbound) left-turn movements. Left-turning traffic would shift to the signalized intersection of Brockton Avenue at Tequesquite Avenue. With this mitigation measure in place, the intersection of Brockton Avenue and the RCH Entrance would improve to LOS C, and the intersection of Brockton Avenue at Tequesquite Avenue would continue to operate at an acceptable Level of Service.

Roadway Mitigation

Based on the City of Riverside significance criteria described in the Level of Service Standard section of this report, the addition of Phase II project-related traffic would cause a significant impact on the following roadway segments:

- 14th Street: Brockton Avenue to Magnolia Avenue / Market Street – LOS F
- Brockton Avenue: 14th Street to Tequesquite Avenue – LOS F
- Brockton Avenue: Tequesquite Avenue to Ramona Drive – LOS F

These roadways are constructed to their ultimate General Plan configurations, and are not planned to be widened beyond their current classification.

RIVERSIDE COMMUNITY HOSPITAL PARKING

Parking Supply

The Riverside Community Hospital campus parking supply currently consists of a combination of surface lots and structured parking located throughout the site. Current construction on the campus has resulted in the recent removal of a 285-space surface lot. As a result, there are currently 1,172 parking spaces on the hospital campus. In addition, the hospital has parking arrangements with the Calvary Presbyterian Church, immediately adjacent to the hospital, to have access to 223 spaces in their parking lot; and with the City of Riverside to lease 458 spaces in off-site public lots during construction on the campus. The total parking supply currently available to the hospital during the site construction is 1,853 spaces.

A parking structure and a medical office building are currently under construction at the southwest corner of the hospital campus. These are approved projects, and as discussed in the Project Description, they are considered to be part of the Pre-EIR Baseline condition. When complete, the parking structure will provide an additional 1,060 parking spaces. Upon completion of the parking structure, the hospital will have 2,232 on-site parking spaces, and will no longer need the off-site parking.

As Phase I and Phase II of the Riverside Community Hospital Expansion Project are completed, various existing parking supplies on campus will be removed or reconfigured, and additional new parking will be provided. A discussion of the parking supply and the required parking at each phase (Pre-EIR Baseline, Phase I and Phase II) of the project is provided in the following sections.

Required Parking

The number of parking spaces required for the various buildings on the Riverside Community Hospital campus is based on the City of Riverside Municipal Code – Chapter 19.580 – Parking and Loading. Based on Table 19.580.060 of the Municipal Code, the parking code requirements for the uses on the Riverside Community Hospital campus would be as follows:

Use	Code Requirement
Hospital	1 space per bed
Medical Office	1 space per 180 square feet of floor area

Pre-EIR Baseline

A summary of the parking requirement for the Riverside Community Hospital site in the pre-EIR baseline condition (upon completion of the parking structure and medical office building that are currently under construction, and before completion of Phase I or Phase II) is provided on **Table 17**. The parking requirement calculation includes an on-site internal capture factor of 15% to account for the mix of medical uses and the campus nature of the site. Physicians and staff from the medical offices who also need to go to other facilities on site, such as the hospital or a lab, would not take up a second parking spot. The campus will be designed to accommodate pedestrian activity across the campus and between buildings. In the pre-EIR baseline condition, the parking requirement for the campus would be 1,187 parking spaces. Compared to the parking supply of 2,232 spaces, this would represent a surplus of 1,045 spaces in the pre-EIR baseline condition.

Phase I

Phase I of the project would consist of the construction of a new 7-story hospital bed tower with 189 beds. The construction of the bed tower will result in the removal of 107 existing parking spaces, resulting in a total on-site parking supply of 2,125 spaces. A summary of the parking requirement for the Hospital at the completion of Phase I is provided on **Table 18**. The parking requirement for the campus at the completion of Phase I would be 1,348 parking spaces. Compared to the parking supply of 2,125 spaces, this would represent a surplus of 777 spaces for the Phase I condition.

Phase II

Phase II of the project would consist of the demolition or re-use of some existing facilities, and the construction of new facilities including an 8-story hospital bed tower. The construction will result in the removal of 319 existing parking spaces, and the provision of 1,000 additional parking spaces in a combination of on-site surface lots, structure parking, and off-site parking agreements, resulting in a total parking supply of 2,806 spaces. A summary of the parking requirement for the Hospital at the completion of Phase II is provided on **Table 19**. The parking requirement for the campus at the completion of Phase II would be 2,592 parking spaces. Compared to the parking supply of 2,806 spaces, this would represent a surplus of 214 spaces for the Phase II condition.

TABLE 17 SUMMARY OF RIVERSIDE COMMUNITY HOSPITAL PARKING PRE-EIR BASELINE CONDITIONS [4]					
PARKING REQUIREMENTS					
Description		**Quantity**	**Code Requirement [1]**	**Required Parking**	
Hospital Building A	58,705	SF GFA	n/a [2]	0	Spaces
Hospital Building B	273	Beds	1 Space / Bed	273	Spaces
Hospital Building C	34	Beds	1 Space / Bed	34	Spaces
Hospital Building D	66	Beds	1 Space / Bed	66	Spaces
MOB 1 (To be vacated)	61,135	SF GFA	n/a	0	Spaces
MOB 2 Cancer Center	65,503	SF GFA	1 Space / 180 SF	364	Spaces
MOB 3 Raincross	57,754	SF GFA	1 Space / 180 SF	321	Spaces
New MOB - 4510 Brockton Ave	61,000	SF GFA	1 Space / 180 SF	339	Spaces
Total Code-Required Parking				1,397	Spaces
On-Site Internal Capture [3]	15%			210	Spaces
Total Parking Requirement				1,187	Spaces
PARKING SUPPLY					
Existing Parking Spaces - On-site				1,172	Spaces
New Parking Structure				1,060	Spaces
Total Available Parking Spaces				2,232	Spaces
Parking Surplus/Deficit (+/-)				+ 1045	Spaces

[1] Source: City of Riverside Municipal Code - Chapter 19.580

[2] Building A serves as hospital support. Parking requirement is included in the per-bed calculation.

[3] On-site internal capture reflects interactions by physicians, staff and visitors between medical office buildings, hospital buildings, and hospital support facilities.

[4] The Pre-EIR Baseline represents the current uses on the RCH site, plus the approved parking structure and MOB, which were under construction but not yet completed at the time this study was undertaken.

TABLE 18 SUMMARY OF RIVERSIDE COMMUNITY HOSPITAL PARKING PHASE I CONDITIONS					
PARKING REQUIREMENTS					
Description		**Quantity**	**Code Requirement [1]**	**Required Parking**	
Hospital Building A	58,705	SF GFA	n/a [2]	0	Spaces
Hospital Building B	273	Beds	1 Space / Bed	273	Spaces
Hospital Building C	34	Beds	1 Space / Bed	34	Spaces
Hospital Building D	66	Beds	1 Space / Bed	66	Spaces
New Phase 1 Bed Tower	105	Beds	1 Space / Bed	105	Spaces
New Phase 1 Bed Tower - Shell	84	Beds	1 Space / Bed	84	Spaces
MOB 2 Cancer Center	65,503	SF GFA	1 Space / 180 SF	364	Spaces
MOB 3 Raincross	57,754	SF GFA	1 Space / 180 SF	321	Spaces
New MOB - 4510 Brockton Ave	61,000	SF GFA	1 Space / 180 SF	339	Spaces
Total Code-Required Parking				1,586	Spaces
On-Site Internal Capture [3]	15%			238	Spaces
Total Parking Requirement				1,348	Spaces
PARKING SUPPLY					
Existing Parking Spaces - On-site				1,172	Spaces
New Parking Structure				1,060	Spaces
Parking Removed due to Construction				-107	Spaces
Total Available Parking Spaces [2]				2,125	Spaces
Parking Surplus/Deficit (+/-)				+ 777	Spaces

[1] Source: City of Riverside Municipal Code - Chapter 19.580

[2] Building serves as hospital support. Parking requirement is included in the per-bed calculation.

[3] On-site internal capture reflects interactions by physicians, staff and visitors between medical office buildings, hospital buildings, and hospital support facilities.

TABLE 19 SUMMARY OF RIVERSIDE COMMUNITY HOSPITAL PARKING PHASE II CONDITIONS					
PARKING REQUIREMENTS					
Description		**Quantity**	**Code Requirement [1]**	**Required Parking**	
Hospital Building B Reuse	176,040	SF GFA	1 Space / 250 SF	704	Spaces
Hospital Building C	34	Beds	1 Space / Bed	34	Spaces
Hospital Building D Reuse	41,431	SF GFA	1 Space / 250 SF	166	Spaces
New Phase 1 Bed Tower / Shell	189	Beds	1 Space / Bed	189	Spaces
New Phase 2 Bed Tower	377	Beds	1 Space / Bed	377	Spaces
MOB 2 Cancer Center	65,503	SF GFA	1 Space / 180 SF	364	Spaces
MOB 3 Raincross	57,754	SF GFA	1 Space / 180 SF	321	Spaces
New MOB - 4510 Brockton Ave	61,000	SF GFA	1 Space / 180 SF	339	Spaces
New MOB	100,000	SF GFA	1 Space / 180 SF	556	Spaces
Total Code-Required Parking				3,050	Spaces
On-Site Internal Capture [3]	15%			458	Spaces
Total Parking Requirement				2,592	Spaces
PARKING SUPPLY					
Existing Parking - On-Site				1,172	Spaces
New Parking Structure				1,060	Spaces
Parking Removed due to Construction				-426	Spaces
New Parking to be Provided [2]				1,000	Spaces
Total Available Parking Spaces				2,806	Spaces
Parking Surplus/Deficit (+/-)				+ 214	Spaces

[1] Source: City of Riverside Municipal Code - Chapter 19.580

[2] Additional parking for Phase II to be provided in a combination of on-site surface lots, structure parking, and off-site parking agreements.

[3] On-site internal capture reflects interactions by physicians, staff and visitors between medical office buildings, hospital buildings, and hospital support facilities.

SPECIAL ISSUES

Brockton Avenue Restriping Project

The City of Riverside has proposed to implement changes along Brockton Avenue known as the Brockton Avenue Restriping project. The restriping project would involve restriping portions of Brockton Avenue between Mission Inn Avenue and Beatty Drive, to convert Brockton Avenue from a 4-lane undivided roadway to a 3-lane roadway with one through lane in each direction and a center two-way left-turn lane. The restriping project would include dedicated right-turn lanes at major intersections, provide bike lanes, and would involve signal timing and phasing improvements.

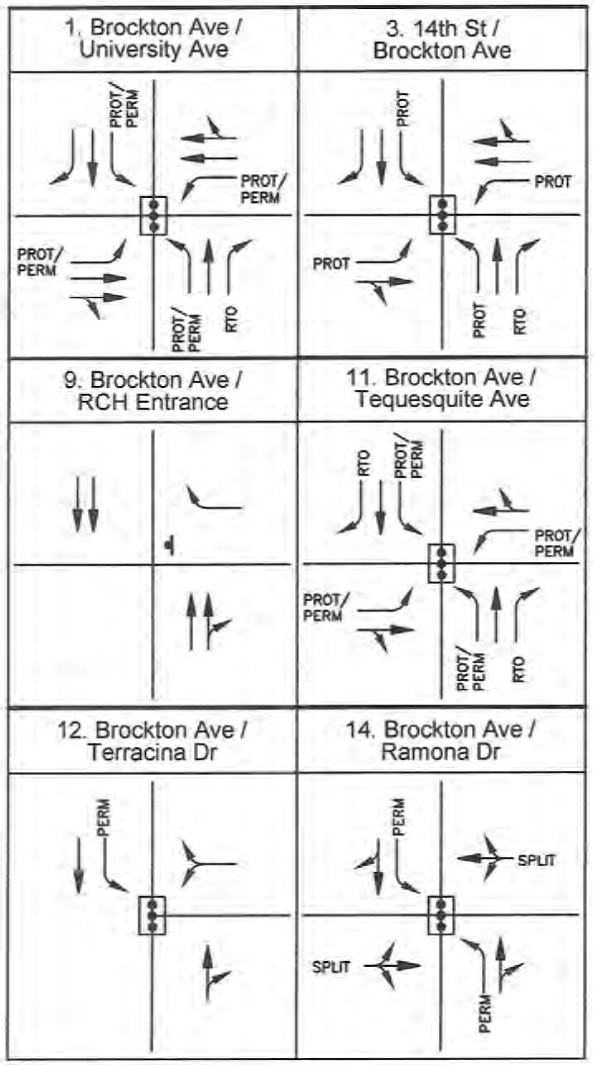
The segment of Brockton Avenue between 14th Street and Tequesquite Avenue (along the RCH frontage) would remain four lanes, with pavement markings and lane assignment to transition to the 3-lane cross-sections on either end. At the intersection of Brockton Avenue at 14th Street, the northbound approach would be restriped to provide one left-turn lane, one through lane, and one right-turn lane with right-turn overlap. At the intersection of Brockton Avenue at Tequesquite Avenue, the southbound approach would provide one left-turn lane, one through lane, and one right-turn lane with protected/permissive phasing on all four approaches. Left turns into the RCH driveway on Brockton Avenue would be prohibited. A conceptual plan for the proposed restriping project, with Brockton Avenue as a four-lane roadway along the project frontage, and transition to the 3-lane cross-section, is provided in ***Appendix G***. The City would require that these improvements be implemented prior to the completion of Phase I, as a condition of project approval.

The Brockton Avenue Restriping project is not part of the Riverside Community Hospital Expansion project, but the restriping would affect the following study intersections along Brockton Avenue:

- Brockton Avenue and University Avenue
- Brockton Avenue and 14th Street
- Brockton Avenue and RCH Entrance
- Brockton Avenue and Tequesquite Avenue
- Brockton Avenue and Terracina Drive
- Brockton Avenue and Ramona Drive.

The restriping project would change the lane configurations at these intersections, which, in turn could affect the peak hour Level of Service. The revised lane configurations that would be in place for these intersections with the Brockton Avenue Restriping are shown on **Figure 25**.

The study intersections along Brockton Avenue were reanalyzed assuming these revised lane configurations. The analysis also assumes that the Riverside Community Hospital Specific Plan Expansion Project and recommended mitigation measures are in place. The resulting Level of Service for Year 2014 Cumulative Conditions with Project are summarized on **Table 20**, and the Level of Service for Build-out plus Project Conditions are summarized on **Table 21**. Since the "Without" and "With" restriping scenarios in these two tables both assume that the RCH Expansion Project and its mitigation measures are in place, the change in delay shown on these tables would be the result of the restriping project, and would not be caused by the RCH project itself.



LEGEND:

- (X) = Study Intersection
- = Signal
- = Stop Sign
- PERM = Permissive
- PROT = Protected
- RTO = Right Turn Overlap

NOT TO SCALE

FIGURE 25
LANE CONFIGURATION AND TRAFFIC CONTROL WITH BROCKTON AVENUE RESTRIPING PROJECT

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TABLE 20
SUMMARY OF INTERSECTION OPERATIONS
YEAR 2014 CUMULATIVE CONDITIONS WITH BROCKTON AVENUE RESTRIPING

INTERSECTION		PEAK HOUR	2014 WITHOUT RESTRIPING		2014 WITH RESTRIPING		DIFFERENCE IN DELAY (c)
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	
1	Brockton Ave and University Ave	AM	24.8	C	27.8	C	3.0
		PM	32.0	C	24.9	C	-7.1
3	Brockton Ave and 14th St	AM	36.5	D	46.3	D	9.8
		PM	44.6	D	49.0	D	4.4
9	Brockton Ave and RCH Entrance	AM	14.1	B	14.1	B	0.0
		PM	17.1	C	17.1	C	0.0
11	Brockton Ave and Tequesquite Ave	AM	19.5	B	27.4	C	7.9
		PM	22.4	C	54.1	D	31.7
12	Brockton Ave and Terracina Dr	AM	0.8	A	1.7	A	0.9
		PM	0.9	A	2.5	A	1.6
14	Brockton Ave and Ramona Dr	AM	7.8	A	15.3	B	7.5
		PM	5.2	A	5.3	A	0.1

Notes:

Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a one-way stop-controlled intersection, delay refers to the movement with the highest delay.

(b) Delay values are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 8.0

(c) Change in delay due to Brockton Avenue restriping.

TABLE 21
SUMMARY OF INTERSECTION OPERATIONS -
BUILD-OUT CONDITIONS WITH BROCKTON AVENUE RESTRIPING

INTERSECTION		PEAK HOUR	BUILD-OUT WITHOUT RESTRIPING		BUILD-OUT WITH RESTRIPING		DIFFERENCE IN DELAY (c)
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	
1	Brockton Ave and University Ave	AM	22.2	C	23.0	C	0.8
		PM	48.4	D	50.6	D	2.2
3	Brockton Ave and 14th St	AM	28.4	C	29.9	C	1.5
		PM	34.5	C	37.8	D	3.3
9	Brockton Ave and RCH Entrance	AM	12.2	B	12.2	B	0.0
		PM	15.1	C	15.1	C	0.0
11	Brockton Ave and Tequesquite Ave	AM	13.5	B	18.6	B	5.1
		PM	24.6	C	50.4	D	25.8
12	Brockton Ave and Terracina Dr	AM	0.8	A	1.9	A	1.1
		PM	0.8	A	2.7	A	1.9
14	Brockton and Ramona Dr	AM	6.6	A	12.8	B	6.2
		PM	32.4	C	32.4	C	0.0

Notes:

Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 8.0

(c) Change in delay due to Brockton Avenue restriping.

Compared to the study intersection peak hour conditions with the current four-lane configuration on Brockton Avenue, the Brockton Avenue Restriping project would cause the following changes in Level of Service:

Year 2014 Cumulative Conditions:

In Year 2014 Cumulative Conditions, with the restriping, including the 4-lane configuration and the restriction of southbound left turns into the RCH driveway, all of the study intersections along Brockton Avenue would operate at an acceptable Level of Service, LOS D or better.

Build-out Conditions:

The results for the Build-out comparison are similar to the Year 2014 comparison. With the restriping, including the 4-lane configuration and the restriction of southbound left turns into the RCH driveway, each of the study intersections along Brockton Avenue would operate at an acceptable Level of Service D or better with the restriping.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

- This Traffic Impact Analysis has been prepared evaluate the traffic-related impacts associated with the proposed Riverside Community Hospital (RCH) Specific Plan Expansion Project in the City of Riverside.

- The hospital campus is currently comprised of a number of buildings of varying ages and condition, with a total bed count of 373 beds. Access to the hospital campus is provided via a number of driveways located on each of the perimeter streets. The main access is currently located on Magnolia Avenue across from 15th Street.

- A 1,060-space parking structure is currently under construction at the northeast corner of the intersection of Tequesquite Avenue and Brockton Avenue (shown as Building Q on the Existing Site Plan). A new medical office building is also currently under construction.

- Riverside Community Hospital is proposing a new Specific Plan for its campus, which will include a short-term and long-term building plan for the campus.

    - ***Phase I*** will consist of a new seven-story hospital bed tower, which will house up to 189 new beds, bringing the total bed count for the campus to 562 beds. Opening Year for Phase I is anticipated to be Year 2014.

    - ***Phase II*** would consist of demolition of some existing facilities, and development of new facilities, to be completed over the next 30 years. **Phase II** would include the demolition of Building A, which would be replaced with a 100,000-square-foot mixed-use building; construction of an 8-story, 600,000-square-foot bed tower and the relocation of beds from Building B and Building D to the new tower, demolition of the existing parking structures (Buildings I and J), and the increase in campus bed capacity to 600. This phase also includes the re-use of Buildings B and D to provide medical clinics, and ancillary services to foster hospital growth.

- In addition to the analysis of the project's traffic-related impacts, this report includes an evaluation of operating conditions at the study intersections along Brockton Avenue, assuming implementation of the proposed Brockton Avenue Restriping project.

- The study area was determined in accordance with the City of Riverside *Traffic Impact Analysis Preparation Guide*, August 2012. Fifteen study intersections and nine roadway segments were identified for evaluation.

- For Existing Conditions, all study intersections currently operate at LOS D or better during both peak periods, with the exception of the unsignalized intersection of Brockton Avenue and the RCH Entrance, which operates at LOS E in the evening peak hour. All study roadway segments are currently operating at LOS C or better under Existing Conditions.

- Phase I of the project would generate 2,446 trips on a daily basis, with 250 trips in the morning peak hour and 269 trips in the evening peak hour. Phase II of the project would generate 5,777 trips on a daily basis, with 462 trips in the morning peak hour and 560 trips in the evening peak hour.

- For Existing Plus Project Conditions, the following study intersections are forecasted to operate at an unacceptable Level of Service:
    - 4. 14th Street and the RCH Entrance: PM – LOS E
    - 9. Brockton Avenue and the RCH Entrance: AM – LOS F, PM – LOS F

- All study roadway segments would operate at LOS C or better under Existing Plus Project Conditions.

- The Opening Year for Phase I is assumed to be Year 2014.

- Opening Year 2014 Cumulative Conditions traffic forecasts were developed by applying an annual growth rate of 0.5% per year, plus adding anticipated traffic from Cumulative Projects in the vicinity of the project.

- For Year 2014 Cumulative Conditions, all study intersections would operate at LOS D or better during both peak periods, with the exception of the unsignalized intersection of Brockton Avenue and the RCH Entrance, which would operate at LOS F in the evening peak hour. All study roadway segments are forecasted to operate at LOS C or better under Year 2014 Cumulative Conditions.

- For Year 2014 Cumulative Plus Project Conditions, all study intersections are forecasted to operate at LOS D or better during both peak periods, with the exception of the unsignalized intersection of Brockton Avenue and the RCH Entrance, which would operate at LOS F in the evening peak hour. All study roadway segments are forecasted to operate at LOS D or better under Year 2014 Cumulative Plus Project Conditions.

- Build-out peak hour traffic forecasts were developed using forecast volumes from the Riverside Traffic Analysis Model (RIVTAM).

- For Build-out Without Project Conditions, the following study intersections are forecasted to operate at an unacceptable Level of Service:
    - 5. 14th Street and Magnolia / Market Street: PM Peak – LOS E
    - 6. 14th Street and Lime Street: AM Peak – LOS E; PM Peak – LOS F
    - 9. Brockton Avenue and the RCH Entrance: PM Peak – LOS E

- Under Build-out Without Project Conditions, the following roadway segments would carry daily traffic volumes in excess of their daily capacity:

    - 14th Street: Brockton Avenue to Magnolia Avenue / Market Street – LOS F
    - Brockton Avenue: 14th Street to Tequesquite Avenue – LOS F

- For Build-out Plus Project Conditions, the following study intersections would operate at an unacceptable Level of Service:

    - 5. 14th Street and Magnolia / Market Street: PM Peak – LOS E
    - 6. 14th Street and Lime Street: AM Peak – LOS E; PM Peak – LOS F
    - 9. Brockton Avenue and the RCH Entrance: PM Peak – LOS F

- Under Build-out Plus Project Conditions, the following roadway segments would carry daily traffic volumes in excess of their daily capacity:

    - 14th Street: Brockton Avenue to Magnolia Avenue / Market Street – LOS F
    - Brockton Avenue: 14th Street to Tequesquite Avenue – LOS F
    - Brockton Avenue: Tequesquite Avenue to Ramona Drive – LOS F

- In accordance with the City of Riverside *Traffic Impact Analysis Preparation Guide*, mitigation measures were identified to mitigate the Project's Phase I impacts in the Opening Year 2014 Cumulative Conditions, and the Phase II impacts in the Build-out Conditions.

- The City of Riverside has proposed to implement changes along Brockton Avenue known as the Brockton Avenue Restriping project. The project would restripe Brockton Avenue between Mission Inn Avenue and Beatty Drive, to convert Brockton Avenue from a 4-lane undivided roadway to a 3-lane roadway with one through lane in each direction and a center two-way left-turn lane. The restriping project would include dedicated right-turn lanes at major intersections, provide bike lanes and additional on-street parking, and would involve signal timing and phasing improvements.

- The segment of Brockton Avenue between 14th Street and Tequesquite Avenue (along the RCH frontage) would remain four lanes, with transitional pavement markings and lane assignment to accommodate the 3-lane cross-sections on either end. Left turns into the RCH driveway on Brockton Avenue would be prohibited.

- The Brockton Avenue Restriping project is not part of the Riverside Community Hospital Expansion project, but because of the proximity of the restriping project to the hospital campus, the study intersections along Brockton Avenue were reanalyzed assuming the proposed restriping revisions.

- The Riverside Community Hospital campus parking supply currently provides a total of 1,172 parking spaces on the hospital campus. In addition, the hospital has parking arrangements with the Calvary Presbyterian Church, immediately adjacent to the hospital, to have access to 223 spaces in their parking lot; and with the City of Riverside to lease 458 spaces in off-site public lots during construction on the campus. The total parking supply currently available to the hospital during the site construction is 1,853 spaces.

- A parking structure and a medical office building are currently under construction at the southwest corner of the hospital campus. When complete, the parking structure will provide an additional 1,060 parking spaces. Upon completion of the parking structure, the hospital will have 2,232 on-site parking spaces, and will no longer need the off-site parking.

- In the Pre-EIR Baseline condition, the parking requirement for the campus would be 1,187 parking spaces. Compared to the parking supply of 2,232 spaces, this would represent a surplus of 1,045 spaces in the pre-EIR baseline condition.

- At completion of Phase I of the project, the site would provide a total on-site parking supply of 2,125 spaces. The parking requirement for the campus at the completion of Phase I would be 1,348 parking spaces. Compared to the parking supply of 2,125 spaces, this would represent a surplus of 777 spaces for the Phase I condition.

- At completion of Phase II of the project, the site would provide a total parking supply of 2,806 spaces. The parking requirement for the campus at the completion of Phase II would be 2,592 parking spaces. Compared to the parking supply of 2,806 spaces, this would represent a surplus of 214 spaces for the Phase II condition.

APPENDIX J

Water Quality Management Plan

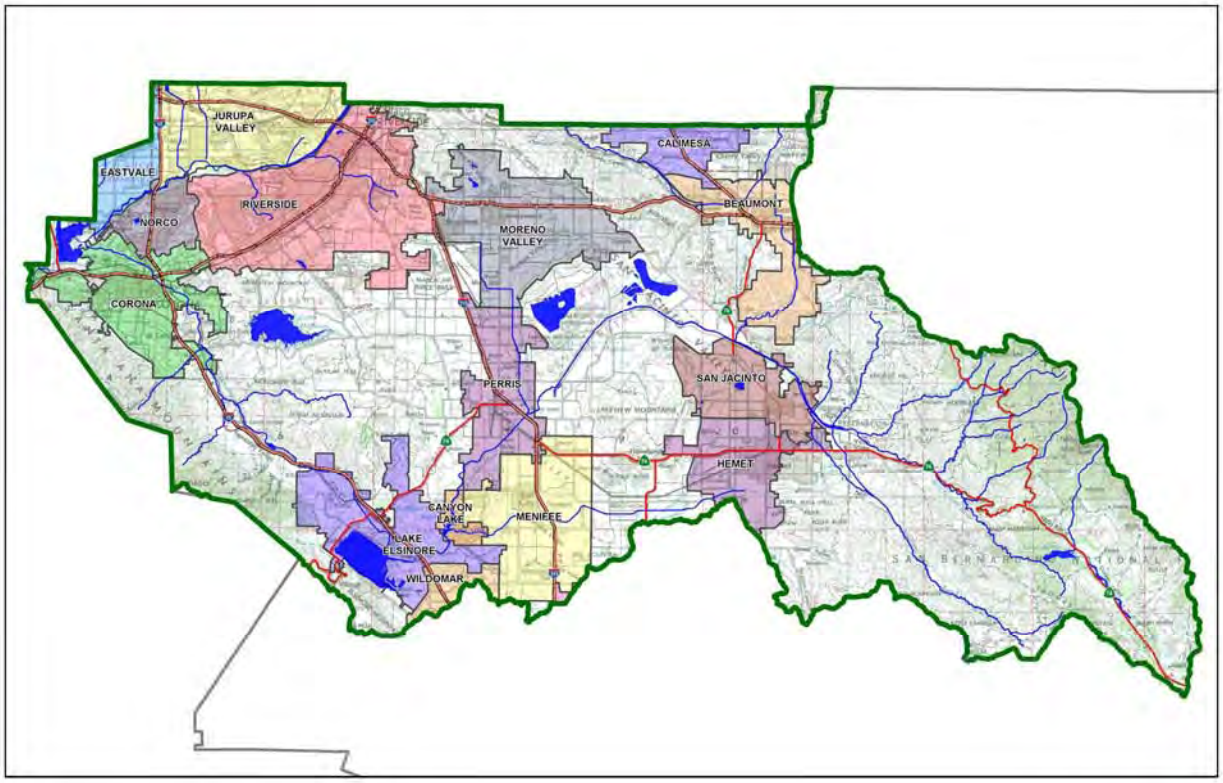
Project Specific Water Quality Management Plan

*A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County*

Project Title: Riverside Community Hospital – Phase 2

Development No: TBA

Design Review/Case No: TBA



☒ **Preliminary**
☐ **Final**

Original Date Prepared: 05/15/2013

Revision Date(s): -

Prepared for Compliance with
Regional Board Order No. **R8-2010-0033**

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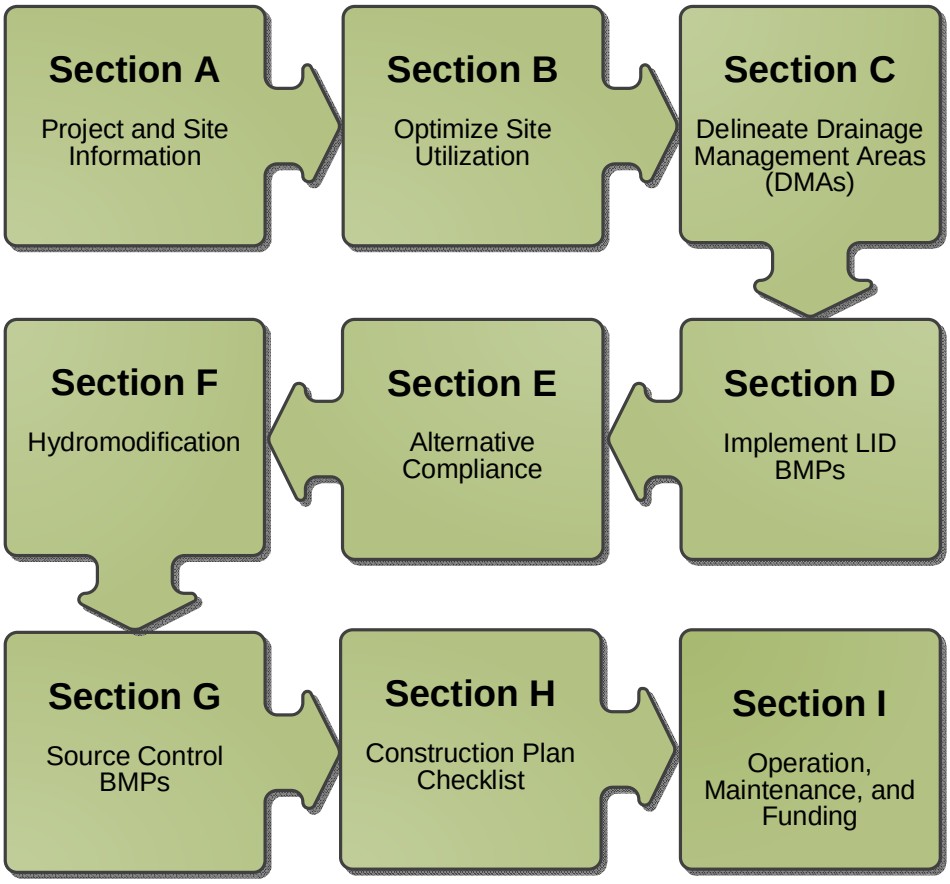
A Brief Introduction

This Project-Specific WQMP Template for the **Santa Ana Region** has been prepared to help guide you in documenting compliance for your project. Because this document has been designed to specifically document compliance, you will need to utilize the WQMP Guidance Document as your "how-to" manual to help guide you through this process. Both the Template and Guidance Document go hand-in-hand, and will help facilitate a well prepared Project-Specific WQMP. Below is a flowchart for the layout of this Template that will provide the steps required to document compliance.



OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for HCA / Riverside Community Hospital by Kimley-Horn and Associates, Inc. for the Riverside Community Hospital – Phase 2 project.

This WQMP is intended to comply with the requirements of City of Riverside for which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under City of Riverside Water Quality Ordinance (Municipal Code Section 14.12).

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

Owner's Signature	Date
Owner's Printed Name	Owner's Title/Position

PREPARER'S CERTIFICATION

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto."

Preparer's Signature	Date
Preparer's Printed Name	Preparer's Title/Position

Preparer's Licensure:

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Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	Hospital, clinical or medical office building (MOB), Hospital Bed Tower, and surface parking
Planning Area:	Currently, Downtown Specific Plan – Healthcare District, but new Specific Plan being developed for this site
Community Name:	Riverside Community Hospital
Development Name:	Riverside Community Hospital – Phase 2
PROJECT LOCATION	
Latitude & Longitude (DMS): 33°58'35" N, 117°22'58" W	
Project Watershed and Sub-Watershed: Santa Ana, Santa Ana River, Reach 3	
APN(s): 217-070-027, 217-300-018, 217-300-019, 217-300-014, 217-300-015, 217-060-024, 217-060-026, 217-060-027, 217-060-028, 217-300-009, 217-300-011	
Map Book and Page No.: Map Grid – 685 F5	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	Hospital, clinical or medical office building, Hospital Bed Tower, surface parking
Proposed or Potential SIC Code(s)	NAICS 812930/SIC 7521, NAICS 621111/SIC 8011, NAICS 621112/SIC 8011, NAICS 621511/SIC 8071, NAICS 621512/SIC 8071
Area of Impervious Project Footprint (SF) (Refer to maps in appendix)	113,570 sq ft (TWR 1) 56,940 sq ft (TWR 2) 20,000 sq ft (MLA)
Total Area of <u>proposed</u> Impervious Surfaces within the Project Limits (SF)/or Replacement	Same as above
Does the project consist of offsite road improvements?	☐ Y ☒ N
Does the project propose to construct unpaved roads?	☐ Y ☒ N
Is the project part of a larger common plan of development (phased project)?	☒ Y ☐ N
EXISTING SITE CHARACTERISTICS	
Total area of <u>existing</u> Impervious Surfaces within the project limits (SF)	
Existing Parking Structure (O)	99,050 sq ft
Existing Medical Office Building (P)	41,920 sq ft
Is the project located within any MSHCP Criteria Cell?	☐ Y ☒ N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	☐ Y ☒ N
Is a Geotechnical Report attached?	☒ Y ☐ N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	Soil Group B
What is the Water Quality Design Storm Depth for the project?	0.55

A.1 Maps and Site Plans

When completing your Project-Specific WQMP, include a map of the local vicinity and existing site. In addition, include all grading, drainage, landscape/plant palette and other pertinent construction plans in Appendix 2. At a **minimum**, your WQMP Site Plan should include the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling

Use your discretion on whether or not you may need to create multiple sheets or can appropriately accommodate these features on one or two sheets. Keep in mind that the Co-Permittee plan reviewer must be able to easily analyze your project utilizing this template and its associated site plans and maps.

A.2 Identify Receiving Waters

Using Table A.1 below, list in order of upstream to downstream, the receiving waters that the project site is tributary to. Continue to fill each row with the Receiving Water's 303(d) listed impairments (if any), designated beneficial uses, and proximity, if any, to a RARE beneficial use. Include a map of the receiving waters in Appendix 1.

Table A.1 Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Santa Ana River, Reach 3	Pathogens, Copper, Lead	AGR, GWR, REC1, REC2, WARM, WILD, RARE	1.5+ Miles

A.3 Additional Permits/Approvals required for the Project:

Table A.2 Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	☐ Y	☒ N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	☐ Y	☒ N
US Army Corps of Engineers, CWA Section 404 Permit	☐ Y	☒ N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	☐ Y	☒ N
Statewide Construction General Permit Coverage	☒ Y	☐ N
Statewide Industrial General Permit Coverage	☐ Y	☒ N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	☐ Y	☒ N
Other *(please list in the space below as required)*	☐ Y	☒ N

If yes is answered to any of the questions above, the Co-Permittee may require proof of approval/coverage from those agencies as applicable including documentation of any associated requirements that may affect this Project-Specific WQMP.

Section B: Optimize Site Utilization (LID Principles)

Review of the information collected in Section 'A' will aid in identifying the principal constraints on site design and selection of LID BMPs as well as opportunities to reduce imperviousness and incorporate LID Principles into the site and landscape design. For example, constraints might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, utility locations or safety concerns. Opportunities might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention BMPs), and differences in elevation (which can provide hydraulic head). Prepare a brief narrative for each of the site optimization strategies described below. This narrative will help you as you proceed with your LID design and explain your design decisions to others.

The 2010 Santa Ana MS4 Permit further requires that LID Retention BMPs (Infiltration Only or Harvest and Use) be used unless it can be shown that those BMPs are infeasible. Therefore, it is important that your narrative identify and justify if there are any constraints that would prevent the use of those categories of LID BMPs. Similarly, you should also note opportunities that exist which will be utilized during project design. Upon completion of identifying Constraints and Opportunities, include these on your WQMP Site plan in Appendix 1.

Site Optimization

The following questions are based upon Section 3.2 of the WQMP Guidance Document. Review of the WQMP Guidance Document will help you determine how best to optimize your site and subsequently identify opportunities and/or constraints, and document compliance.

Did you identify and preserve existing drainage patterns? If so, how? If not, why?

Yes, existing drainage patterns are expected to be maintained in general. Stormwater runoff generated from the site utilizes one of five outfall locations, as identified and labeled on the Campus Drainage Plans in the appendix.

A 24-inch storm drain lateral in the northeast quadrant of the Brockton and Tequesquite intersection serves as Outfall #1. This lateral connects to an existing 12'x7' RCB storm drain in Tequesquite. Runoff from the western portion of the site including all parking structures is piped to this location via the on-site storm drainage system. The phase 2 bed towers, which will replace the central parking structures, will utilize this outfall.

Drainage on northeast portion of the site is toward the street via sheet flow, and then continues west in the gutter along the south side of Fourteenth Street. Just prior to the westernmost driveway to the campus along Fourteenth Street, a curb inlet, identified as Outfall #2, collects surface runoff for conveyance to the public storm drain system. The future multilevel addition, which will replace existing Building A, will utilize this outfall.

The southeast portion of the site drains to an inlet at the extreme southeast corner of the campus, where the inlet serves as Outfall #3 and connects to the City owned storm system in Magnolia Avenue. Outfall #4 is an inlet located directly above the 12'x7' RCFCD box culvert system, and Outfall #5 collects and conveys all drainage from the Raincross Medical Office Building (Q). Currently, there are no plans to redevelop the areas or modify the drainage patterns upstream of outfalls #3, #4, and #5.

Did you identify and protect existing vegetation? If so, how? If not, why?

The subject site is currently highly developed and consists of mostly impervious surfaces such as roofs, pavement, and sidewalks with only limited amounts of pervious landscaped areas within planting beds or along the site perimeter. Due to the reconfiguration of the site to accommodate the proposed redevelopment, most of the existing landscaped areas within the limits of disturbance cannot be protected. However, new landscaped areas will be provided with proposed construction. The future multilevel addition, which will replace Building A at the northeast corner of the site, is expected to decrease the imperviousness on that portion of the site and allow for increased opportunities for landscaping in that area. Additionally, existing on-site vegetation beyond the limits of disturbance will be protected.

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?

There are minimal areas on-site with natural infiltration capacity. To the extent practicable, these few areas will be preserved. Otherwise, new landscaped areas will provide some natural infiltration capacity.

Did you identify and minimize impervious area? If so, how? If not, why?

Yes, the proposed bed towers and multilevel addition have a high floor area ratio, which reduces the amount of impervious area by providing for more square footage within the same impervious footprint. Additionally, the proposed multilevel addition is expected to reduce the impervious area around its location due to the demolition of Building A.

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

Yes, where feasible, stormwater runoff will drain away from structures into adjacent pervious landscaped areas.

Section C: Delineate Drainage Management Areas (DMAs)

Utilizing the procedure in Section 3.3 of the WQMP Guidance Document which discusses the methods of delineating and mapping your project site into individual DMAs, complete Table C.1 below to appropriately categorize the types of classification (e.g., Type A, Type B, etc.) per DMA for your project site. Upon completion of this table, this information will then be used to populate and tabulate the corresponding tables for their respective DMA classifications.

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s)[1]	Area (Sq. Ft.)	DMA Type
TWR 1	Roof / Sidewalks / Other Impervious	113,570	Type 'D' – Area that drains to BMP
TWR 1	Pervious Landscaping (HSG - B)	11,630	Type 'D' – Area that drains to BMP
TWR 2	Roof / Sidewalks / Other Impervious	56,940	Type 'D' – Area that drains to BMP
MLA	Roof / Sidewalks / Other Impervious	20,000	Type 'D' – Area that drains to BMP

[1] *Reference Table 2-1 in the WQMP Guidance Document to populate this column*

Table C.2 Type 'A', Self-Treating Areas

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)
N/A			

Table C.3 Type 'B', Self-Retaining Areas

Self-Retaining Area				**Type 'C' DMAs that are draining to the Self-Retaining Area**		
DMA Name/ ID	Post-project surface type	Area (square feet) [A]	Storm Depth (inches) [B]	DMA Name / ID	[C] from Table C.4 = [C]	Required Retention Depth (inches) [D]
N/A						

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas

DMA					**Receiving Self-Retaining DMA**		
DMA Name/ ID	Area (square feet) [A]	Post-project surface type	Runoff factor [B]	Product [C] = [A] x [B]	DMA name /ID	Area (square feet) [D]	Ratio [C]/[D]
N/A							

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
TWR 1	Existing infiltration system located southwest of the new parking structure designed with additional capacity to accommodate this DMA
TWR 2	Existing infiltration system located southwest of the new parking structure designed with additional capacity to accommodate this DMA
MLA	Future infiltration system located near the future multilevel addition in the northeast corner of the site. Final size and location to be determined upon development and detailed in Final WQMP

Note: More than one drainage management area can drain to a single LID BMP, however, one drainage management area may not drain to more than one BMP.

Section D: Implement LID BMPs

D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (see discussion in Chapter 2.4.4 of the WQMP Guidance Document for further details)? ☐ Y ☒ N

If yes has been checked, Infiltration BMPs shall not be used for the site. If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

Geotechnical Report

A Geotechnical Report or Phase I Environmental Site Assessment may be required by the Copermittee to confirm present and past site characteristics that may affect the use of Infiltration BMPs. In addition, the Co-Permittee, at their discretion, may not require a geotechnical report for small projects as described in Chapter 2 of the WQMP Guidance Document. If a geotechnical report has been prepared, include it in Appendix 3. In addition, if a Phase I Environmental Site Assessment has been prepared, include it in Appendix 4.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? ☐ Y ☒ N (Greater than 5 acres/50,000 sf impervious area)

Infiltration Feasibility

Table D.1 below is meant to provide a simple means of assessing which DMAs on your site support Infiltration BMPs and is discussed in the WQMP Guidance Document in Chapter 2.4.5. Check the appropriate box for each question and then list affected DMAs as applicable. If additional space is needed, add a row below the corresponding answer.

Table D.1 Infiltration Feasibility

Does the project site…	YES	NO
…have any DMAs with a seasonal high groundwater mark shallower than 10 feet?		X
If Yes, list affected DMAs:		
…have any DMAs located within 100 feet of a water supply well?		X
If Yes, list affected DMAs:		
…have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact?		X
If Yes, list affected DMAs:		
…have measured in-situ infiltration rates of less than 1.6 inches / hour?		X
If Yes, list affected DMAs:		
…have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface?		X
If Yes, list affected DMAs:		
…geotechnical report identify other site-specific factors that would preclude effective and safe infiltration?		X
Describe here:		

If you answered "Yes" to any of the questions above for any DMA, Infiltration BMPs should not be used for those DMAs and you should proceed to the assessment for Harvest and Use below.

D.2 Harvest and Use Assessment

Please check what applies*:*

- ☐ Reclaimed water will be used for the non-potable water demands for the project.
- ☐ Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).
- X The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.

If any of the above boxes have been checked, Harvest and Use BMPs need not be assessed for the site. If neither of the above criteria applies, follow the steps below to assess the feasibility of irrigation use, toilet use and other non-potable uses (e.g., industrial use).

Irrigation Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

Total Area of Irrigated Landscape (Acres): N/A

Type of Landscaping (Conservation Design or Active Turf): N/A

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces (Acres): N/A

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

Enter your EIATIA factor: N/A

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

Minimum required irrigated area (Acres): NA

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (acres) (Step 4)	**Available Irrigated Landscape (acres) (Step 1)**
N/A	N/A

Toilet Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for toilet flushing uses on your site:

Step 1: Identify the projected total number of daily toilet users during the wet season, and account for any periodic shut downs or other lapses in occupancy:

Projected Number of Daily Toilet Users: N/A

Project Type: N/A

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for toilet use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: N/A

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-1 in Chapter 2 to determine the minimum number or toilet users per tributary impervious acre (TUTIA).

Enter your TUTIA factor: N/A

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of toilet users that would be required.

Minimum number of toilet users: N/A

Step 5: Determine if harvesting stormwater runoff for toilet flushing use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required Toilet Users (Step 4)	**Projected number of toilet users (Step 1)**
N/A	*NA*

Other Non-Potable Use Feasibility

Are there other non-potable uses for stormwater runoff on the site (e.g. industrial use)? See Chapter 2 of the Guidance for further information. If yes, describe below. If no, write N/A.

N/A

Step 1: Identify the projected average daily non-potable demand, in gallons per day, during the wet season and accounting for any periodic shut downs or other lapses in occupancy or operation.

Average Daily Demand: N/A

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for the identified non-potable use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: N/A

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-3 in Chapter 2 to determine the minimum demand for non-potable uses per tributary impervious acre.

Enter the factor from Table 2-3: N/A

Step 4: Multiply the unit value obtained from Step 4 by the total of impervious areas from Step 3 to develop the minimum number of gallons per day of non-potable use that would be required.

Minimum required use: N/A

Step 5: Determine if harvesting stormwater runoff for other non-potable use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required non-potable use (Step 4)	**Projected average daily use (Step 1)**
N/A	*N/A*

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention and Biotreatment, unless a site-specific analysis has been completed that demonstrates technical infeasibility as noted in D.3 below.

D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

Select one of the following:

X LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).

A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

D.4 Feasibility Assessment Summaries

From the Infiltration, Harvest and Use, Bioretention and Biotreatment Sections above, complete Table D.2 below to summarize which LID BMPs are technically feasible, and which are not, based upon the established hierarchy.

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
TWR 1	☒	☐	☐	☐	☐
TWR 2	☒	☐	☐	☐	☐
MLA	☒	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

For those DMAs where LID BMPs are not feasible, provide a brief narrative below summarizing why they are not feasible, include your technical infeasibility criteria in Appendix 5, and proceed to Section E below to document Alternative Compliance measures for those DMAs. Recall that each proposed DMA must pass through the LID BMP hierarchy before alternative compliance measures may be considered.

D.5 LID BMP Sizing

Each LID BMP must be designed to ensure that the Design Capture Volume will be addressed by the selected BMPs. First**,** calculate the Design Capture Volume for each LID BMP using the V_{BMP} worksheet in Appendix F of the LID BMP Design Handbook. Second**,** design the LID BMP to meet the required V_{BMP} using a method approved by the Co-Permittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Co-Permittee to assist you in correctly sizing your LID BMPs. Complete Table D.3 below to document the Design Capture Volume and the Proposed Volume for each LID BMP. Provide the completed design procedure sheets for each LID BMP in Appendix 6. You may add additional rows to the table below as needed.

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Enter BMP Name / Identifier Here*		
	[A]		[B]	[C]	[A] x [C]			
TWR 1	*113,570*	*Impervious*	*1.0*	*0.89*	*101,304*	*Design Storm Depth (in)*	*Design Capture Volume,* V_{BMP} *(cubic feet)*	*Proposed Volume on Plans (cubic feet)*
TWR 1	*11,630*	*Pervious*	*0.1*	*0.11*	*1,285*			
TWR 2	*56,940*	*Impervious*	*1.0*	*0.89*	*50,791*			
	$A_T = \Sigma[A]$				286,136	0.55	13,114	***13,200***

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Enter BMP Name / Identifier Here*		
	[A]		[B]	[C]	[A] x [C]			
						Design Storm Depth (in)	*Design Capture Volume,* V_{BMP} *(cubic feet)*	*Proposed Volume on Plans (cubic feet)*
MLA	*20,000*	*Impervious*	*1.0*	*0.89*	*17,840*			
	$A_T = \Sigma[A]$				17,840	0.55	818	***1000****

* Future infiltration system to be designed prior to development of multilevel addition. Details to be provided with final WQMP

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to LID waiver approval by the Copermittee). Check one of the following Boxes:

X LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- *Or* -

☐ The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Co-Permittee and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The following alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.

E.1 Identify Pollutants of Concern

Utilizing Table A.1 from Section A above which noted your project's receiving waters and their associated EPA approved 303(d) listed impairments, cross reference this information with that of your selected Priority Development Project Category in Table E.1 below. If the identified General Pollutant Categories are the same as those listed for your receiving waters, then these will be your Pollutants of Concern and the appropriate box or boxes will be checked on the last row. The purpose of this is to document compliance and to help you appropriately plan for mitigating your Pollutants of Concern in lieu of implementing LID BMPs.

Table E.1 Potential Pollutants by Land Use Type

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories							
	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash & Debris	Oil & Grease
☐ Detached Residential Development	P	N	P	P	N	P	P	P
☐ Attached Residential Development	P	N	P	P	N	P	P	P(2)
☒ Commercial/Industrial Development	P(3)	P	P(1)	P(1)	P(5)	P(1)	P	P
☐ Automotive Repair Shops	N	P	N	N	P(4, 5)	N	P	P
☐ Restaurants (>5,000 ft^2)	P	N	N	N	N	N	P	P
☐ Hillside Development (>5,000 ft^2)	P	N	P	P	N	P	P	P
☐ Parking Lots (>5,000 ft^2)	P(6)	P	P(1)	P(1)	P(4)	P(1)	P	P
☐ Retail Gasoline Outlets	N	P	N	N	P	N	P	P
Project Priority Pollutant(s) of Concern	☒	☒	☒	☒	☒	☒	☒	☒

P = Potential
N = Not Potential
(1) A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected
(2) A potential Pollutant if the project includes uncovered parking areas; otherwise not expected
(3) A potential Pollutant is land use involving animal waste
(4) Specifically petroleum hydrocarbons
(5) Specifically solvents
(6) Bacterial indicators are routinely detected in pavement runoff

E.2 Stormwater Credits

Projects that cannot implement LID BMPs but nevertheless implement smart growth principles are potentially eligible for Stormwater Credits. Utilize Table 3-8 within the WQMP Guidance Document to identify your Project Category and its associated Water Quality Credit. If not applicable, write N/A.

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage[2]
N/A	N/A
Total Credit Percentage[1]	

[1]*Cannot Exceed 50%*
[2]*Obtain corresponding data from Table 3-8 in the WQMP Guidance Document*

E.3 Sizing Criteria

After you appropriately considered Stormwater Credits for your project, utilize Table E.3 below to appropriately size them to the DCV, or Design Flow Rate, as applicable. Please reference Chapter 3.5.2 of the WQMP Guidance Document for further information.

Refer to worksheets provided in appendix.

N/A – Refer to section D above.

Table E.3 Treatment Control BMP Sizing

DMA Type/ID	**DMA Area (square feet)**	**Post-Project Surface Type**	**Effective Impervious Fraction, I_f**	**DMA Runoff Factor**	**DMA Area x Runoff Factor**		***Enter BMP Name / Identifier Here***		
	[A]		[B]	[C]	[A] x [C]				
						Design Storm Depth (in)	*Minimum Design Capture Volume or Design Flow Rate (cubic feet or cfs)*	*Total Storm Water Credit % Reduction*	*Proposed Volume or Flow on Plans (cubic feet or cfs)*
	A_T = Σ[A]				Σ= [D]	[E]	$[F] = \frac{[D]x[E]}{[G]}$	[F] X (1-[H])	[I]

[B], [C] is obtained as described in Section 2.3.1 from the WQMP Guidance Document
[E] is obtained from Exhibit A in the WQMP Guidance Document
[G] is for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12
[H] is from the Total Credit Percentage as Calculated from Table E.2 above
[I] as obtained from a design procedure sheet from the BMP manufacturer and should be included in Appendix 6

E.4 Treatment Control BMP Selection

Treatment Control BMPs typically provide proprietary treatment mechanisms to treat potential pollutants in runoff, but do not sustain significant biological processes. Treatment Control BMPs must have a removal efficiency of a medium or high effectiveness as quantified below:

- **High**: equal to or greater than 80% removal efficiency
- **Medium**: between 40% and 80% removal efficiency

Such removal efficiency documentation (e.g., studies, reports, etc.) as further discussed in Chapter 3.5.2 of the WQMP Guidance Document, must be included in Appendix 6. In addition, ensure that proposed Treatment Control BMPs are properly identified on the WQMP Site Plan in Appendix 1.

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID[1]	Priority Pollutant(s) of Concern to Mitigate[2]	Removal Efficiency Percentage[3]
Infiltration System	Sediment, Nutrients, Trash, Metals, Bacteria, Oil and Grease, Organics	High

[1] *Treatment Control BMPs must not be constructed within Receiving Waters. In addition, a proposed Treatment Control BMP may be listed more than once if they possess more than one qualifying pollutant removal efficiency.*
[2] *Cross Reference Table E.1 above to populate this column.*
[3] *As documented in a Co-Permittee Approved Study and provided in Appendix 6.*

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

Once you have determined that the LID design is adequate to address water quality requirements, you will need to assess if the proposed LID Design may still create a HCOC. Review Chapters 2 and 3 (including Figures 3-7) of the WQMP Guidance Document to determine if your project must mitigate for Hydromodification impacts. If your project meets one of the following criteria which will be indicated by the check boxes below, you do not need to address Hydromodification at this time. However, if the project does not qualify for Exemptions 1, 2 or 3, then additional measures must be added to the design to comply with HCOC criteria. This is discussed in further detail below in Section F.2.

HCOC EXEMPTION 1: The Priority Development Project disturbs less than one acre. The Co-Permittee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply.

HCOC EXEMPTION 2: The volume and time of concentration[1] of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption? ☒ Y ☐ N

If yes, report results in Table F.1 below and provide your substantiated hydrologic analysis in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	**Post-condition**	**% Difference**
Time of Concentration	Outfall #1 – 13.3 min Outfall #2 – 5 min Outfall #3 – 5 min Outfall #4 – 5 min Outfall #5 – 5 min	Outfall #1 – 13.3 min Outfall #2 – 5 min Outfall #3 – 5 min Outfall #4 – 5 min Outfall #5 – 5 min	Outfall #1 – 0% Outfall #2 – 0% Outfall #3 – 0% Outfall #4 – 0% Outfall #5 – 0%
Volume (Cubic Feet)	Outfall #1 – 40,691 Outfall #2 – 15,297 Outfall #3 – 12,819 Outfall #4 – 28 Outfall #5 – 9,811	Outfall #1 – 41,993 Outfall #2 – 7,987 Outfall #3 – 12,819 Outfall #4 – 28 Outfall #5 – 9,811	Outfall #1 – 3.2% Outfall #2 – -48% Outfall #3 – 0% Outfall #4 – 0% Outfall #5 – 0%

[1] Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

HCOC EXEMPTION 3: All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Sensitivity Maps.

Does the project qualify for this HCOC Exemption? ☒ Y ☐ N

If yes, HCOC criteria do not apply and note below which adequate sump applies to this HCOC qualifier:

HCOC Exemption 3 is satisfied because all outfalls discharge into an engineered, fully-hardened, and maintained conveyance system to the Santa Ana River as identified on the map in the appendix.

F.2 HCOC Mitigation

If none of the above HCOC Exemption Criteria are applicable, HCOC criteria is considered mitigated if they meet one of the following conditions:

a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.

b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.

c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Be sure to include all pertinent documentation used in your analysis of the items a, b or c in Appendix 7.

Section G: Source Control BMPs

Source control BMPs include permanent, structural features that may be required in your project plans — such as roofs over and berms around trash and recycling areas — and Operational BMPs, such as regular sweeping and "housekeeping", that must be implemented by the site's occupant or user. The MEP standard typically requires both types of BMPs. In general, Operational BMPs cannot be substituted for a feasible and effective permanent BMP. Using the Pollutant Sources/Source Control Checklist in Appendix 8, review the following procedure to specify Source Control BMPs for your site:

1. ***Identify Pollutant Sources***: Review Column 1 in the Pollutant Sources/Source Control Checklist. Check off the potential sources of Pollutants that apply to your site.

2. ***Note Locations on Project-Specific WQMP Exhibit***: Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist. Show the location of each Pollutant source and each permanent Source Control BMP in your Project-Specific WQMP Exhibit located in Appendix 1.

3. ***Prepare a Table and Narrative***: Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist. In the left column of Table G.1 below, list each potential source of runoff Pollutants on your site (from those that you checked in the Pollutant Sources/Source Control Checklist). In the middle column, list the corresponding permanent, Structural Source Control BMPs (from Columns 2 and 3 of the Pollutant Sources/Source Control Checklist) used to prevent Pollutants from entering runoff. **Add additional narrative** in this column that explains any special features, materials or methods of construction that will be used to implement these permanent, Structural Source Control BMPs.

4. ***Identify Operational Source Control BMPs:*** To complete your table, refer once again to the Pollutant Sources/Source Control Checklist. List in the right column of your table the Operational BMPs that should be implemented as long as the anticipated activities continue at the site. Copermittee stormwater ordinances require that applicable Source Control BMPs be implemented; the same BMPs may also be required as a condition of a use permit or other revocable Discretionary Approval for use of the site.

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
Bacterial Indicators	TC-11 Infiltration Basin	SC-10 Non-Stormwater Discharges, SC-40 Contaminated or Erodible Areas, SC-41 Building and Grounds Maintenance, SC-44 Drainage System Maintenance
Metals	TC-11 Infiltration Basin	SC-10 Non-Stormwater Discharges, SC-11 Spill Prevention, Control and Cleanup, SC-40 Contaminated or Erodible Areas, SC-41 Building and Grounds Maintenance, SC-42 Building Repair and Construction, SC-43 Parking/Storage Area Maintenance

Nutrients	TC-11 Infiltration Basin	SC-10 Non-Stormwater Discharges, SC-40 Contaminated or Erodible Areas, SC-41 Building and Grounds Maintenance,
Toxic Organic Compounds	TC-11 Infiltration Basin	SC-10 Non-Stormwater Discharges, SC-11 Spill Prevention, Control and Cleanup, SC-40 Contaminated or Erodible Areas, SC-42 Building Repair and Construction, SC-43 Parking/Storage Area Maintenance
Sediments	TC-11 Infiltration Basin	SC-40 Contaminated or Erodible Areas, SC-41 Building and Grounds Maintenance, SC-42 Building Repair and Construction, SC-43 Parking/Storage Area Maintenance, SC-44 Drainage System Maintenance
Trash and Debris	TC-11 Infiltration Basin	SC-42 Building Repair and Construction, SC-43 Parking/Storage Area Maintenance, SC-44 Drainage System Maintenance
Oil and Grease	TC-11 Infiltration Basin	SC-10 Non-Stormwater Discharges, SC-11 Spill Prevention, Control and Cleanup, SC-40 Contaminated or Erodible Areas, SC-42 Building Repair and Construction, SC-43 Parking/Storage Area Maintenance

Section H: Construction Plan Checklist

Populate Table H.1 below to assist the plan checker in an expeditious review of your project. The first two columns will contain information that was prepared in previous steps, while the last column will be populated with the corresponding plan sheets. This table is to be completed with the submittal of your final Project-Specific WQMP.

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)
To be submitted with Final WQMP		

Note that the updated table — or Construction Plan WQMP Checklist — is **only a reference tool** to facilitate an easy comparison of the construction plans to your Project-Specific WQMP. Co-Permittee staff can advise you regarding the process required to propose changes to the approved Project-Specific WQMP.

Section I: Operation, Maintenance and Funding

The Copermittee will periodically verify that Stormwater BMPs on your site are maintained and continue to operate as designed. To make this possible, your Copermittee will require that you include in Appendix 9 of this Project-Specific WQMP:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.
3. An outline of general maintenance requirements for the Stormwater BMPs you have selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility. Geo-locating the BMPs using a coordinate system of latitude and longitude is recommended to help facilitate a future statewide database system.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance. Include a brief description of typical landscape maintenance for these areas.

Your local Co-Permittee will also require that you prepare and submit a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on your site. An agreement assigning responsibility for maintenance and providing for inspections and certification may also be required.

Details of these requirements and instructions for preparing a Stormwater BMP Operation and Maintenance Plan are in Chapter 5 of the WQMP Guidance Document.

Maintenance Mechanism: Riverside Community Hospital Facilities Management shall be responsible for maintenance.

Will the proposed BMPs be maintained by a Home Owners' Association (HOA) or Property Owners Association (POA)?

☐ Y ☒ N

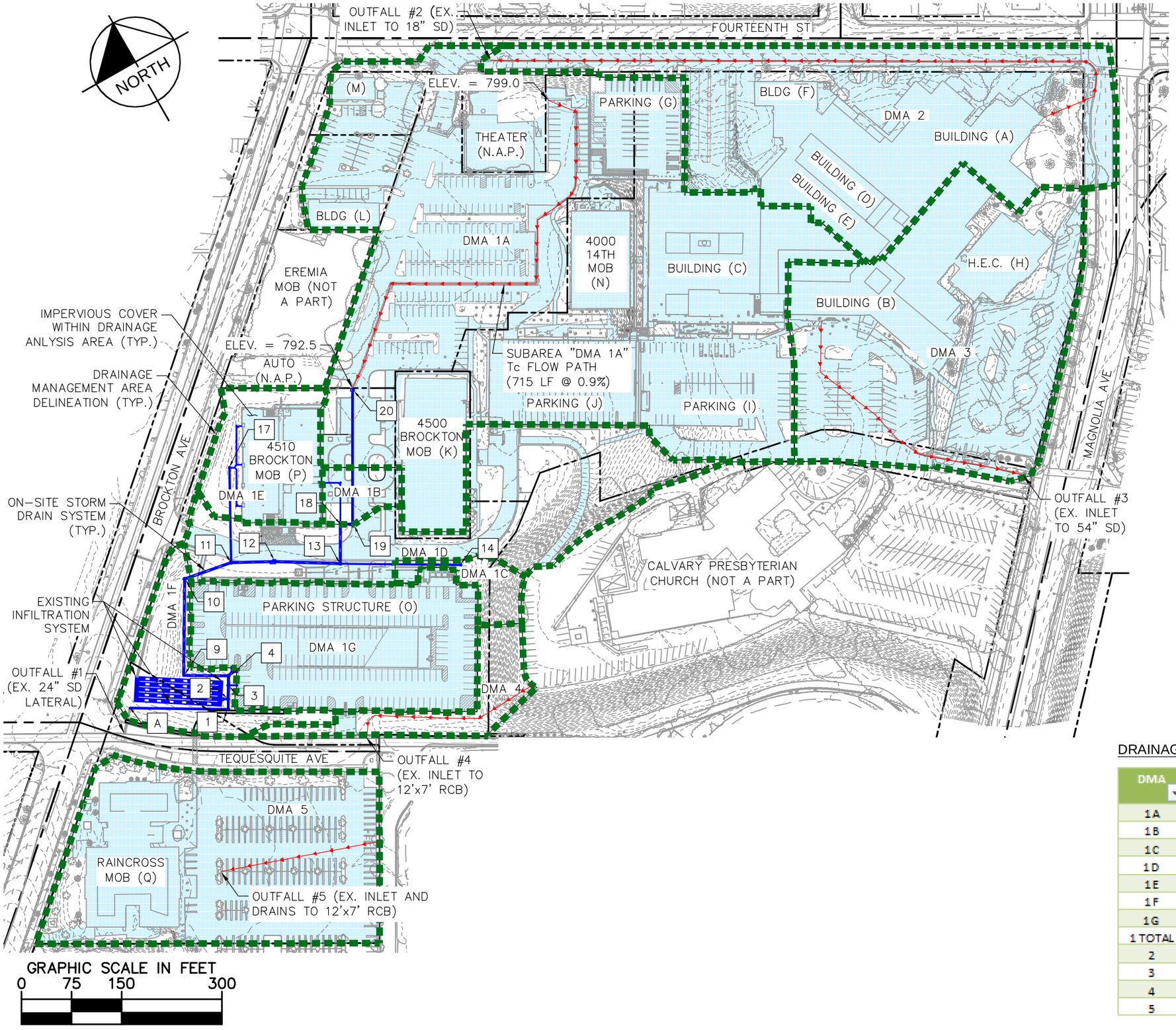
Include your Operation and Maintenance Plan and Maintenance Mechanism in Appendix 9. Additionally, include all pertinent forms of educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP in Appendix 10.

Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan, and Receiving Waters Map

Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan, and Receiving Waters Map



DRAINAGE AREA SUMMARY

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)
1A	20	8.66	7.68	0.98
1B	19	0.20	0.15	0.05
1C	14	0.21	0.02	0.19
1D	12	2.02	0.82	1.20
1E	17	0.75	0.48	0.28
1F	9	0.70	0.02	0.68
1G	4	1.82	1.82	0.00
1 TOTAL	EXISTING	14.36	10.98	3.38
2	EXISTING	3.81	2.49	1.31
3	EXISTING	3.51	2.96	0.56
4	EXISTING	0.46	0.02	0.43
5	EXISTING	2.82	2.32	0.49

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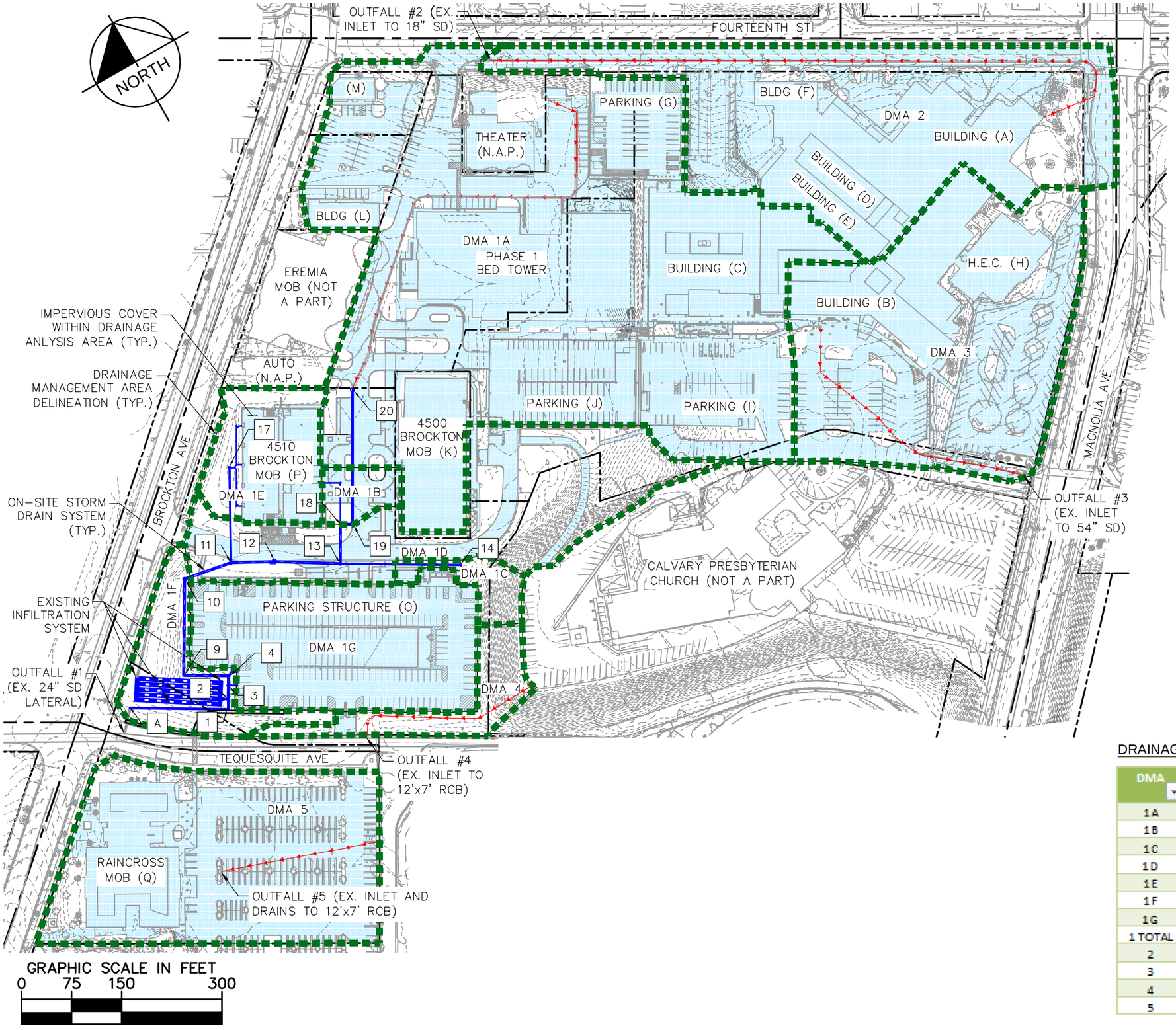
RIVERSIDE COMMUNITY HOSPITAL
CAMPUS EXPANSION PROJECT
4445 MAGNOLIA STREET
RIVERSIDE, CA

CAMPUS DRAINAGE PLAN
PREDEVELOPMENT CONDITION

DATE: 5/15/2013
KHA PROJECT #: 095680007



DRAINAGE AREA SUMMARY

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)
1A	20	8.66	7.76	0.90
1B	19	0.20	0.15	0.05
1C	14	0.21	0.02	0.19
1D	12	2.02	0.82	1.20
1E	17	0.75	0.48	0.28
1F	9	0.70	0.02	0.68
1G	4	1.82	1.82	0.00
1 TOTAL	EXISTING	14.36	11.06	3.30
2	EXISTING	3.81	3.33	0.47
3	EXISTING	3.51	2.96	0.56
4	EXISTING	0.46	0.02	0.43
5	EXISTING	2.82	2.32	0.49

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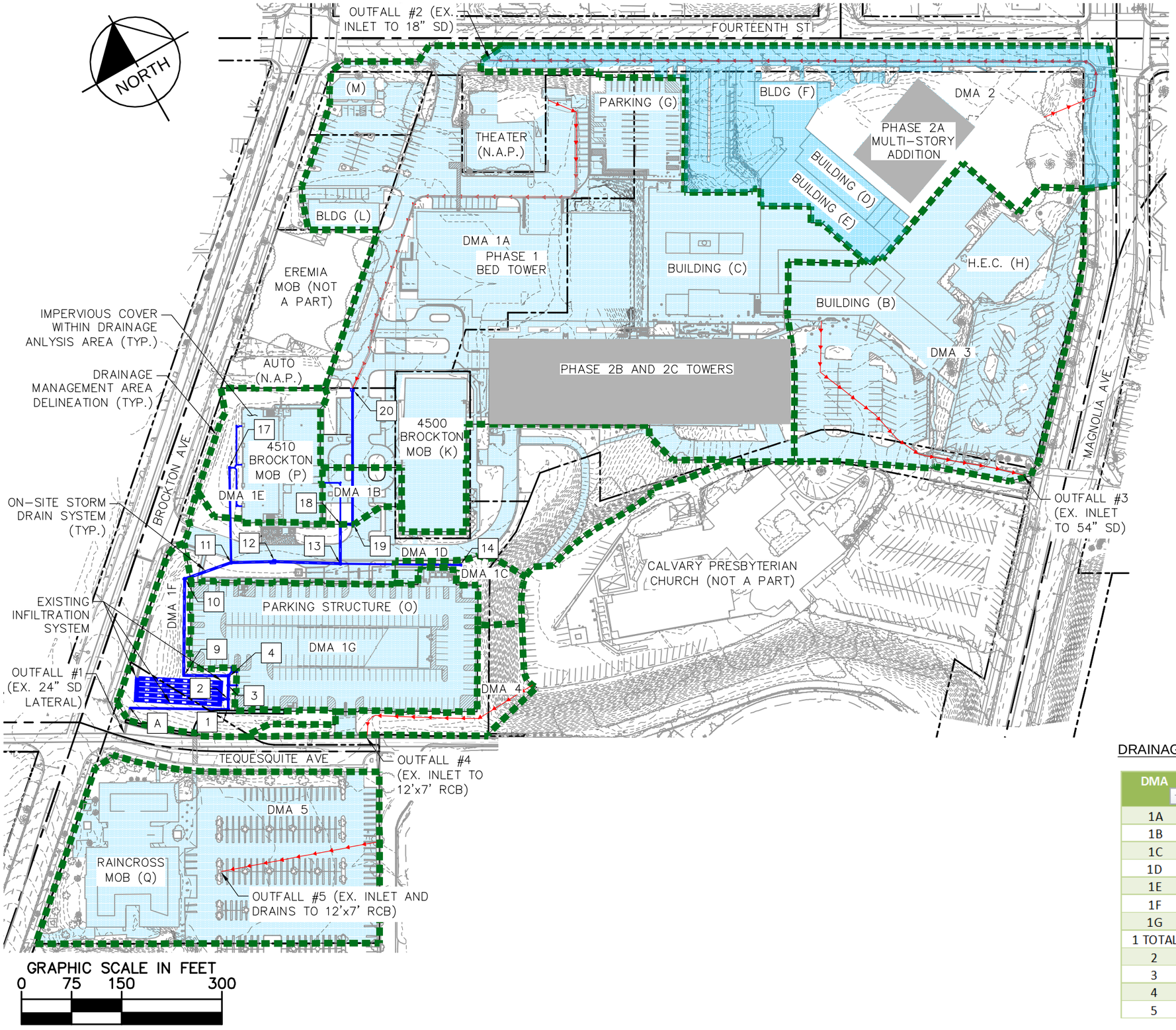
RIVERSIDE COMMUNITY HOSPITAL
CAMPUS EXPANSION PROJECT
4445 MAGNOLIA STREET
RIVERSIDE, CA

CAMPUS DRAINAGE PLAN
POST-DEVELOPMENT PHASE 1
CONDITION

DATE: 5/15/2013
KHA PROJECT #: 095680007



DRAINAGE AREA SUMMARY

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)
1A	20	8.66	7.76	0.90
1B	19	0.20	0.15	0.05
1C	14	0.21	0.02	0.19
1D	12	2.02	0.82	1.20
1E	17	0.75	0.48	0.28
1F	9	0.70	0.02	0.68
1G	4	1.82	1.82	0.00
1 TOTAL	EXISTING	14.36	11.06	3.30
2	EXISTING	3.81	2.49	1.31
3	EXISTING	3.51	2.96	0.56
4	EXISTING	0.46	0.02	0.43
5	EXISTING	2.82	2.32	0.49

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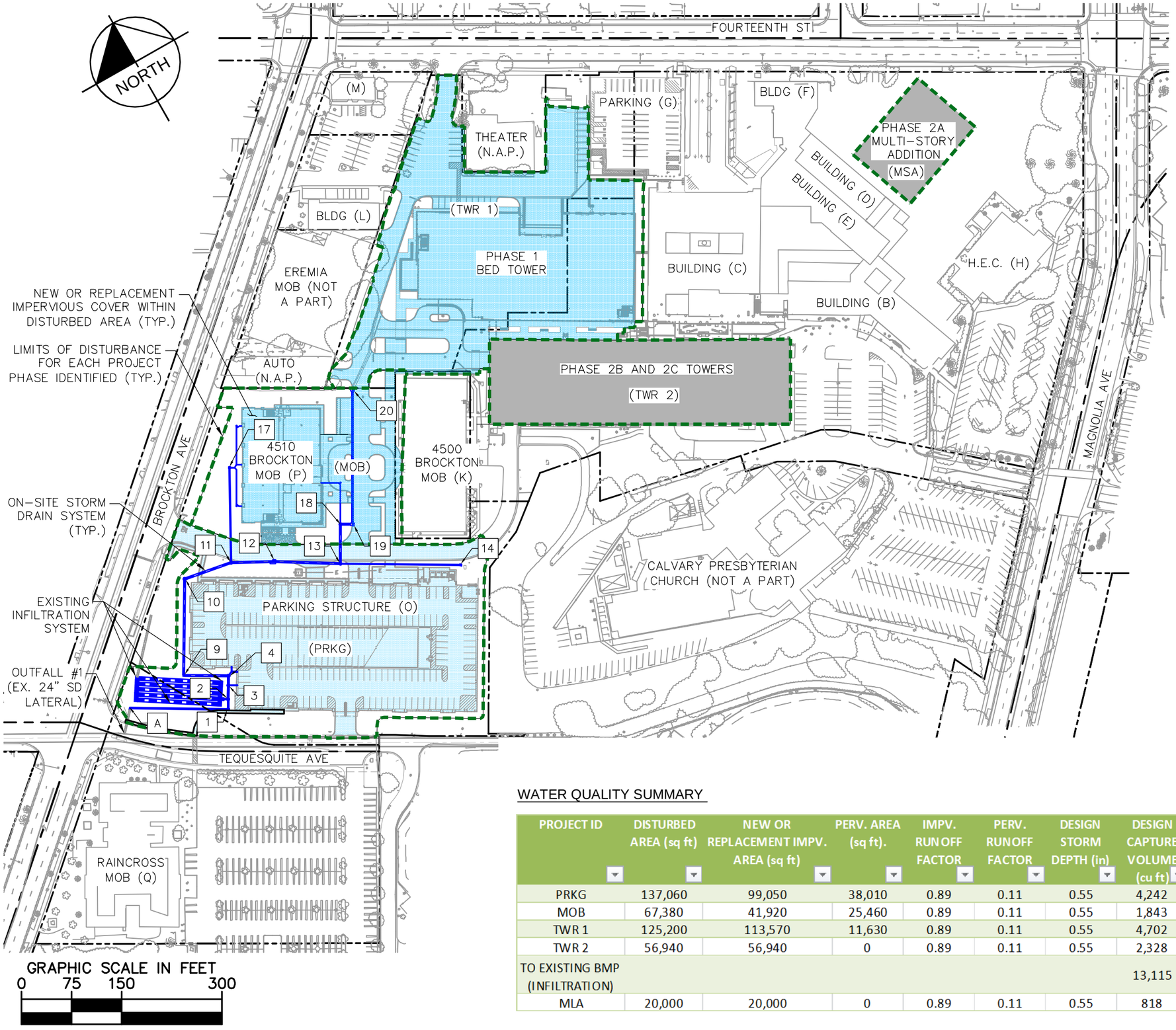
RIVERSIDE COMMUNITY HOSPITAL
CAMPUS EXPANSION PROJECT
4445 MAGNOLIA STREET
RIVERSIDE, CA

CAMPUS DRAINAGE PLAN
POST-DEVELOPMENT PHASE 2
CONDITION

DATE: 5/15/2013
KHA PROJECT #: 095680007



WATER QUALITY SUMMARY

PROJECT ID	DISTURBED AREA (sq ft)	NEW OR REPLACEMENT IMPV. AREA (sq ft)	PERV. AREA (sq ft).	IMPV. RUNOFF FACTOR	PERV. RUNOFF FACTOR	DESIGN STORM DEPTH (in)	DESIGN CAPTURE VOLUME (cu ft)	BMP VOLUME (cu ft)	NOTES
PRKG	137,060	99,050	38,010	0.89	0.11	0.55	4,242		
MOB	67,380	41,920	25,460	0.89	0.11	0.55	1,843		
TWR 1	125,200	113,570	11,630	0.89	0.11	0.55	4,702		
TWR 2	56,940	56,940	0	0.89	0.11	0.55	2,328		
TO EXISTING BMP (INFILTRATION)							13,115	13,234	PRKG, MOB, TWR 1, AND TWR 2 DRAIN TO EXISTING INFILTRATION BMP
MLA	20,000	20,000	0	0.89	0.11	0.55	818		

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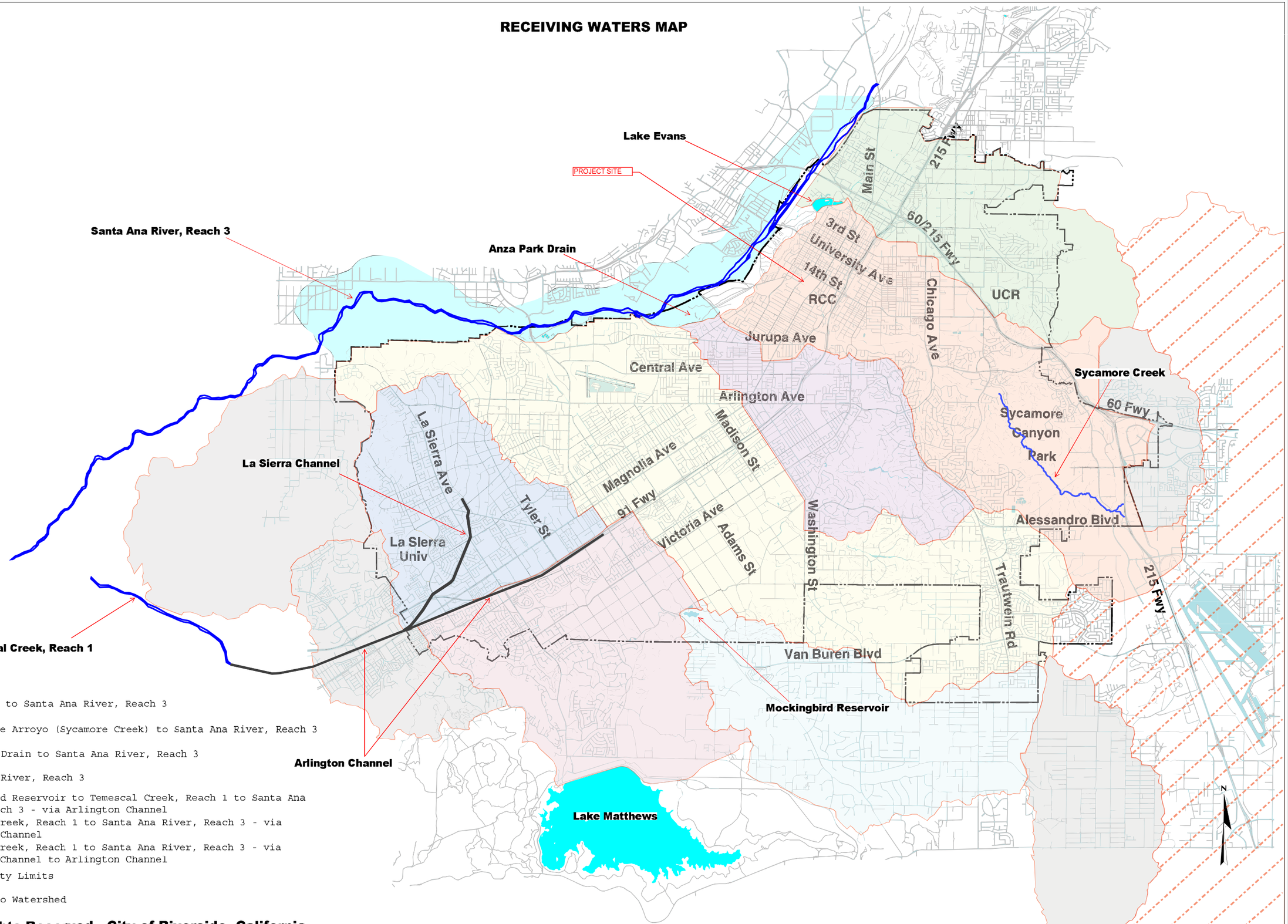
RIVERSIDE COMMUNITY HOSPITAL
CAMPUS EXPANSION PROJECT
4445 MAGNOLIA STREET
RIVERSIDE, CA

CAMPUS WATER QUALITY PLAN
POST-DEVELOPMENT PHASE 2
CONDITION

DATE: 5/15/2013
KHA PROJECT #: 095680007

RECEIVING WATERS MAP



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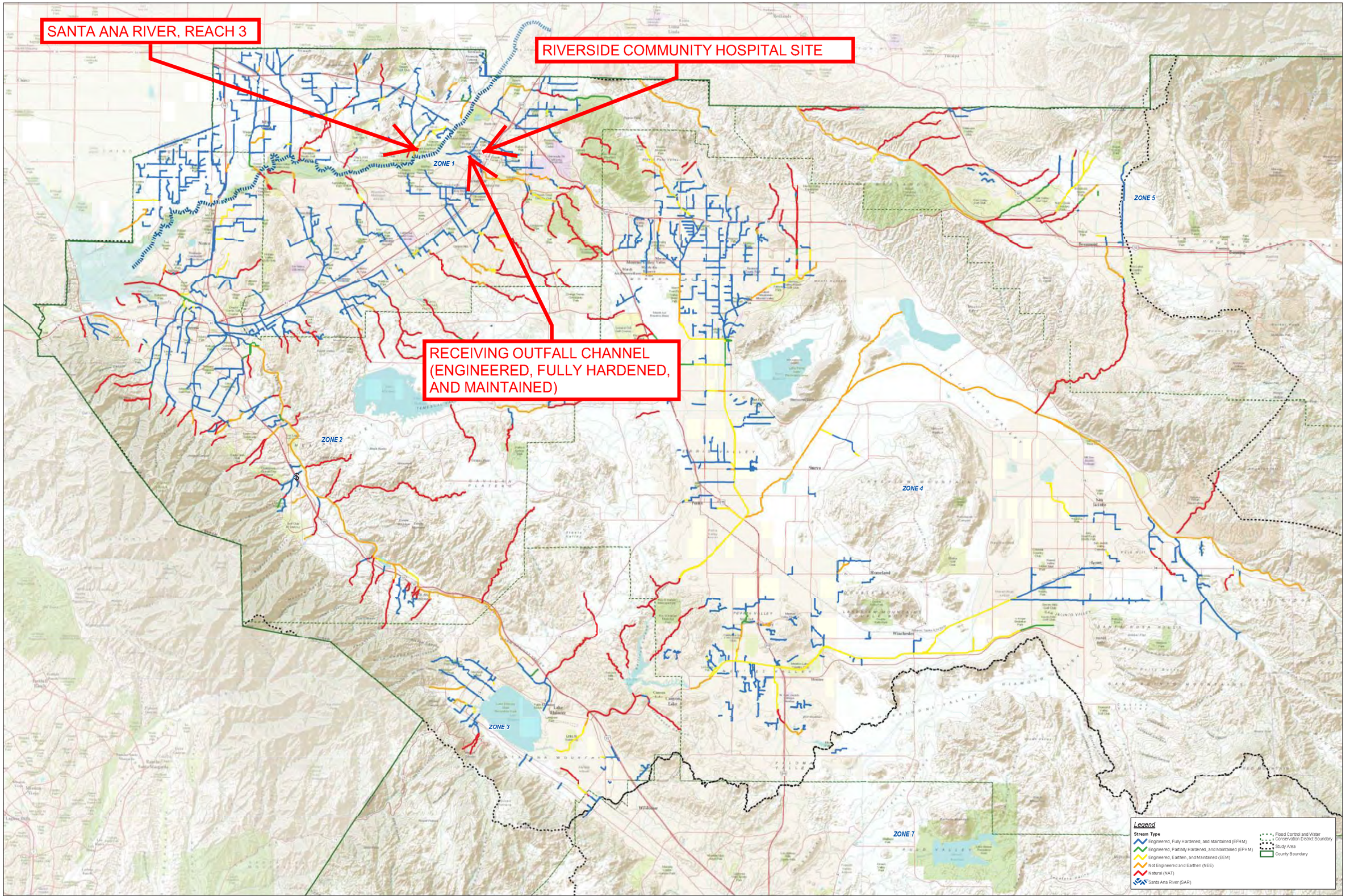
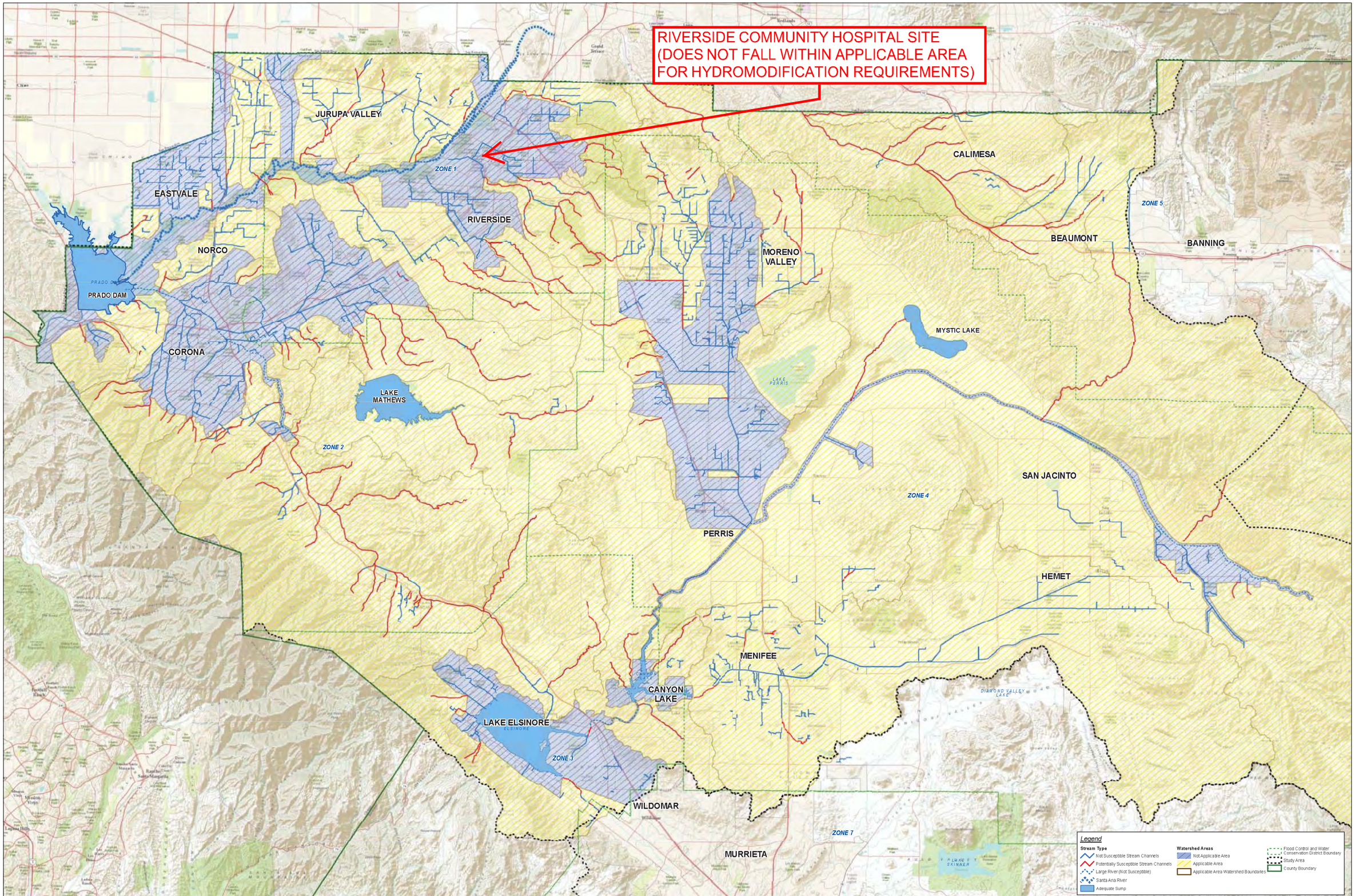


Existing Stream Channel Delineation Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

Map 1



HCOC Applicability Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

Map 2

Appendix 2: Construction Plans

Grading and Drainage Plans

To be submitted with Final WQMP.

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

The following soils report and infiltration testing report is for the recent parking garage project as this is the most current available data. Site soil conditions for Phase 1 and Phase 2 are assumed to be substantially similar to the parking garage project. Updated soils report and infiltration testing will be provided with Final WQMP.

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15345 Anacapa Road, Suite D, Victorville, CA 92392 ◆ Phone (760) 243-0506 ◆ Fax (760) 243-1225

April 30, 2009

HCA Management Services, L.P.
One Park Plaza, Building II-E
Nashville, Tennessee 37203
Attention: Mr. Bryan Seely, Design & Construction

Job No. 09162-3

Dear Mr. Seely:

This letter transmits six copies of the Geotechnical Investigation report prepared for the proposed five-story parking garage, part of the Riverside Community Hospital expansion project, to be located on the existing hospital campus, 4445 Magnolia Avenue, in the City of Riverside, California.

We appreciate this opportunity to provide geotechnical services for this project. If you have questions or comments concerning this report, please contact this firm at your convenience.

Respectfully submitted,
C.H.J., INCORPORATED

Fred Yi, Ph.D., P.E.
Project Engineer

FY:ndt

Distribution: HCA (1)
Perkins & Will (5)

GEOTECHNICAL INVESTIGATION
PROPOSED 5-STORY PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL
EXPANSION PROJECT
4445 MAGNOLIA AVENUE
RIVERSIDE, CALIFORNIA
PREPARED FOR
HCA MANAGEMENT SERVICES, L.P.
JOB NO. 09162-3

C.H.J. Incorporated
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April 30, 2009

HCA Management Services, L.P.
One Park Plaza, Building II-E
Nashville, Tennessee 37203
Attention: Mr. Bryan Seely, Design & Construction

Job No. 09162-3

Dear Mr. Seely:

Attached herewith is the Geotechnical Investigation report prepared for the proposed five-story parking garage, part of the Riverside Community Hospital expansion project, to be located on the existing hospital campus, 4445 Magnolia Avenue, in the City of Riverside, California.

This report was based upon a scope of services generally outlined in our proposal letter, dated March 13, 2009, and other written and verbal communications.

We appreciate this opportunity to provide geotechnical services for this project. If you have questions or comments concerning this report, please contact this firm at your convenience.

Respectfully submitted,
C.H.J., INCORPORATED

Fred Yi, Ph.D., P.E.
Project Engineer

FY:ndt

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GEOTECHNICAL INVESTIGATION
PROPOSED 5-STORY PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL
EXPANSION PROJECT
4445 MAGNOLIA AVENUE
RIVERSIDE, CALIFORNIA
PREPARED FOR
HCA MANAGEMENT SERVICES, L.P.
JOB NO. 09162-3

INTRODUCTION

During April and May of 2009, a geotechnical investigation was performed by this firm for the proposed five-story parking garage, part of the Riverside Community Hospital expansion project, to be located on the existing hospital campus, 4445 Magnolia Avenue, in the City of Riverside, California. The proposed parking garage includes two portions: a 5-story above-grade parking structure and a surface parking area. The purpose of this investigation was to explore and evaluate the geotechnical conditions at the subject site and to provide appropriate geotechnical recommendations for design of the proposed development. This firm previously performed a geotechnical investigation for the hospital expansion project (Job No. 07881-3, report dated January 22, 2008, and addendums with various dates).

To orient our investigation at the site, a 100-scale Site Plan, dated February 4, 2009, prepared by Perkins & Will, was furnished for our use. The Site Plan furnished to us is titled as "Option 6". Alternate locations and design schemes may be considered prior to final structure design. Project grading plans and structure floor elevations were not available at the time of our investigation. The approximate location of the proposed parking garage is shown on the attached Index Map (Enclosure "A-1").

This investigation and resultant reports are not intended for submittal to OSHPD for review; as such, approval is not required.

The results of our investigation, together with our conclusions and recommendations, are presented in this report.

SCOPE OF SERVICES

The scope of services provided during this geotechnical investigation were based on the Geotechnical Investigation Scope, dated January 29, 2009, and Architecture Requirements, undated, both emailed to us by Ms. Sapna Bhat, of Perkins & Will, on February 2, 2009 and included the following:

- Review of published and unpublished literature and maps
- Review and analysis of stereoscopic aerial photographs flown between 1948 and 2005
- A geologic field reconnaissance of the site and surrounding area
- Logging and sampling of eight exploratory borings for testing and evaluation
- Laboratory testing on selected samples including density, moisture content, optimum moisture - maximum density relationships, Atterberg limits, direct shear strength, hydro-consolidation, expansion potential, sand equivalent, R-value, and chemical/corrosivity analyses
- Evaluation of geologic and geotechnical data including:
  - geologic concerns and hazards, including faulting and seismicity
  - liquefaction potential
  - seismic settlement and seismic differential settlement
  - expansion potential
- Development of site-specific recommendations regarding:
  - site grading
  - shallow foundation design
  - deep foundation design
  - lateral earth pressures
  - preliminary shoring design
  - preliminary asphalt concrete (AC) and Portland cement concrete (PCC) pavement structural section designs
  - mitigation of potential geotechnical concerns and hazards such as liquefaction and seismic settlement

The scope of services had the following exceptions:

- Boring elevations were estimated using topographic data provided by the client. Topographic survey to determine boring location elevations was not included in our scope.

- Investigation of toxic materials or methane was not included in our scope. We recommend that a Phase I Environmental Site Assessment (ASTM E 1527) be performed to screen the site for the presence of hazardous materials. We would be pleased to prepare a proposal for this service, if desired.

- We did not place any borings outside of the building footprint, due to the size of the building relative to the remainder of the site. Borings were placed near pavement and hardscape areas to obtain information for design purposes.

- Assessment of condition of the adjacent existing buildings is not included in our scope. Our scope is limited to evaluating the effects of proposed foundation loads on existing structures.

PROJECT CONSIDERATIONS

Based on the garage options plan (Option 6) provided to us, we understand that the proposed parking garage, as part of the hospital expansion project, includes two portions: a 5-story above-grade parking structure and a surface parking area.

The proposed parking structure will be oriented east-west and located south and west of the existing medical office building at 4500 Brockton Avenue and will have dimensions of approximately 400 feet by 200 feet, occupying approximately 80,000 square feet in plan view. This site is relatively flat and primarily occupied by an existing parking lot and landscaping.

The proposed surface parking will be located immediately west of the Calvary Presbyterian Church, located at 4495 Magnolia Avenue, and will be constructed with retaining walls. The existing site is characterized by a large west-facing slope, approximately 35 feet high. The level of the proposed lot will be about half way down the hillside. The surface parking area will tie into the garage on the first or second level. It is assumed that construction of the surface parking at this location will entail signifi-cant excavation into the existing hillside.

Project grading plans and planned structure elevations were not available at the time of our investigation. The final project grading plan and foundation plans should be reviewed by the geotechnical engineer.

Groundwater and lithologic data from our prior investigation for the hospital expansion project (C.H.J., Incorporated, 2008), located northeast of the proposed parking garage, was utilized in this investigation and are included in "Appendix B".

SITE DESCRIPTION

The proposed parking garage is to be located within an existing surface parking area located south and west of the existing hospital. The proposed parking structure will be located in the west-draining arroyo (Tequesquite Arroyo). Additional parking is planned for the upper portion of the site along a west to northwest-facing slope above the Tequesquite Arroyo. The additional parking area is currently in use as parking for the nearby church.

The site topography includes an approximately 35-foot-high slope descending northwest from the area of the existing church to a lower elevation defined by the lower of two existing parking levels. The areas at the top and toe of this slope are relatively planar. The original slope was likely the result of stream incision of an older alluvial fan surface that has formed a relatively flat-bottomed arroyo with a veneer of younger alluvium and slope-deposited colluvium adjacent to a relatively higher older alluvial fan surface. The existing site topography and slope configuration likely resulted from grading performed during construction of the existing parking areas.

As part of this investigation, stereoscopic aerial photographs dating back to 1948 were reviewed for past land usage and evidence of geotechnical hazards. In the 1948 and 1962 photographs, the hospital campus consists of the former structures and existing structures located north of the proposed parking structure. The area of the proposed parking structure is undeveloped land along the bottom of the arroyo, and the upper parking area is located along the top of a natural slope formed at the edge of Tequesquite Arroyo. More recent photographs show the development of the site as a parking area.

No evidence of faulting or recent flooding was observed on the site in the aerial photographs.

FIELD INVESTIGATION

The soil conditions underlying the subject site were explored by means of eight exploratory borings. Five borings (drilled to a maximum depth of 90 feet) were placed within the proposed parking structure area with the remaining three borings placed within the proposed surface parking area; two of them (drilled to a maximum depth of 28 feet) placed near the edge of the existing parking area of the Presbyterian church and another one (drilled to a depth of 30 feet) placed in the northwest area of the proposed surface parking area, near the existing access road at the toe of slope. All of the exploratory borings were drilled with a CME 75 track rig equipped for soil sampling. The approximate locations of our exploratory borings are indicated on the attached Site Plan (Enclosure "A-2").

Continuous logs of the subsurface conditions, as encountered within the exploratory borings, were recorded at the time of drilling by a staff geologist from this firm. Both a standard penetration test (SPT) sampler (2 inch outer diameter and 1-3/8 inch inner diameter) and a modified California sampler (3-1/4 inch outer diameter and 2-3/8 inch inner diameter) were utilized in our investigation. Relatively undisturbed samples were obtained by driving the modified California sampler (a split-spoon ring sampler) ahead of the borings at selected levels. The penetration resistance was recorded on the boring logs as the number of hammer blows used to advance the sampler in 6-inch increments (or less if noted). Samplers are driven with an automatic hammer that drops a 140-pound weight 30 inches for each blow. After the required seating, samplers are advanced up to 18 inches, providing up to 3 sets of blowcounts at each sampling interval. The recorded blows are raw numbers without any corrections for hammer type (automatic vs. manual cat head) or sampler size (California sampler vs. SPT sampler). Relatively undisturbed, as well as bulk, samples of typical soil types obtained were returned to the laboratory in sealed containers for testing and evaluation.

Our exploratory boring logs, together with our in-place blowcounts per 6-inch increment, are presented in Appendix "B". The stratification lines presented on the boring logs represent approximate boundaries between soil types, which may include gradual transitions.

LABORATORY INVESTIGATION

Included in our laboratory testing program were field moisture content tests on all samples returned to the laboratory and field dry density tests on all relatively undisturbed samples. The results are included on the exploratory boring logs. An optimum moisture content - maximum dry density relationship was established for a typical soil type in order that the relative compaction of the subsoils might be evaluated. Direct shear tests on selected relatively undisturbed samples of soils were performed in order to provide shear strength parameters for bearing capacity, lateral resistance, and earth pressure evaluations. Consolidation tests were performed on selected relatively undisturbed samples in order to provide consolidation parameters for settlement evaluations. An expansion index test was performed on a selected sample of clay-bearing soil in order that we might evaluate the expansion potential of the subsoils. Sieve analyses and Atterberg limits were performed on selected samples of soil for classification purposes. Selected samples of materials were delivered to Schiff Associates for soil corrosivity analyses.

Summaries of the laboratory test results are presented in Appendix "C".

SITE GEOLOGY

The site is located on the Perris Block, a portion of the Peninsular Ranges Geomorphic Province. The Perris Block is a fault-bounded region of relative tectonic stability composed of crystalline bedrock of the Southern California Batholith that is thinly and discontinuously mantled by sedimentary material. Several geomorphic surfaces are well developed on the Perris Block that represent former, local, erosional/depositional base levels. The site lies in the northern portion of the Perris Block in an area of relatively low-lying Pleistocene-age and Holocene-age alluvium surrounded by elevated erosion surfaces.

The proposed parking structure is located in the Tequesquite Arroyo, a drainage incised into the older alluvial fan located along the upper portion within the proposed parking area. As mapped by Morton and Cox (2001), the proposed parking structure is underlain by native materials consisting of young alluvial sediments (Qya). Fill was encountered within Exploratory Boring Nos. 1 through 6 at depths ranging from depths of 4 to 6 feet below the ground surface (bgs). The fill consists of silty sand and locally

includes gravel. Color and clay content variation of the fill between borings suggests age and/or source differences for the fill across the site. The fill is underlain by native alluvial fan sediments consisting of silty sand, sandy silt, and sand locally with interbedded clayey sand. The upper approximately 20 to 30 feet of native materials is comprised of Holocene-age (younger) alluvium in a loose to medium dense condition. The underlying Pleistocene-age (older) alluvium is generally dense to very dense.

Bedrock was not encountered in our exploratory borings or CPT soundings to the maximum depth attained (90 feet).

Refusal to further advancement of the drilling augers was experienced in Exploratory Boring Nos. 1 through 6.

Expansion testing performed on a sample of clay-bearing soil indicated a " low" potential for expansion when tested as per ASTM D 4829.

Consolidation testing and field dry density tests on relatively undisturbed samples indicated negligible to moderate potential for hydroconsolidation (water induced collapse) and a potential for moderate settlement for the upper younger alluvial soils when loaded.

Groundwater was encountered within Exploratory Boring Nos. 1, 2, 4, and 5 at approximate depths of 27 feet to 29 feet.

The results of corrosivity testing are discussed in the "Chemical/Corrosivity Testing" section of this report.

Slight caving of the borings was experienced upon removal of the augers.

A more detailed description of the subsurface soil conditions encountered is presented on the attached boring logs (Appendix "B").

FAULTING

The site does not lie within or immediately adjacent to an Alquist-Priolo Earthquake Fault Zone designated by the State of California to include traces of suspected active faulting. No active faults are shown on or in the immediate vicinity of the site on published geologic maps, nor was evidence for active faulting on or immediately adjacent to the site observed during the geologic field reconnaissance or on the aerial photographs reviewed.

The tectonics of the Southern California area are dominated by the interaction of the North American Plate and the Pacific Plate, which are apparently sliding past each other in a translational manner. Although some of the motion may be accommodated by rotation of crustal blocks such as the western Transverse Ranges (Dickinson, 1996), the San Andreas fault zone is thought to represent the major surface expression of the tectonic boundary and to be accommodating most of the translational motion between the Pacific Plate and the North American Plate. However, some of the plate motion is apparently also partitioned out to the other northwest-trending, strike-slip faults that are thought to be related to the San Andreas system, such as the San Jacinto fault and the Elsinore fault. Local compressional or extensional strain resulting from the translational motion along this boundary is accommodated by left-lateral, reverse, and normal faults such as the Cucamonga fault, the Crafton Hills fault zone, and the blind thrust faults of the Los Angeles Basin (Matti and others, 1992; Morton and Matti, 1993).

The Box Springs fault is shown by Rogers (1965) as a buried trace beneath Pleistocene-age alluvium approximately 4.8 kilometers (3 miles) east of the site. Although this fault is readily visible as a bedrock feature, it is considered to be inactive.

The San Bernardino segment of the San Jacinto fault zone is located approximately 12.2 kilometers (7.6 miles) east-northeast of the site and is assigned a characteristic maximum magnitude of Mw 6.7. The San Jacinto Valley segment of the San Jacinto fault zone traverses portions of the San Jacinto Valley and San Timoteo Badlands and is located approximately 13.2 kilometers east-southeast of the site. The San Jacinto Valley segment is assigned a characteristic magnitude of Mw 6.9 and is considered to contribute a majority of hazards to the site, with respect to seismic shaking. The San Jacinto fault zone is a system

of northwest-trending right-lateral strike-slip faults. More large historic earthquakes have occurred on the San Jacinto fault than any other fault in Southern California (Working Group on California Earthquake Probabilities, 1988). The Working Group on California Earthquake Probabilities (1995) tentatively assigned a 43 percent (±17 percent) probability of a major earthquake on the San Jacinto Valley segment of the San Jacinto fault for the 30-year interval from 1994 to 2024.

The southern margin of the San Gabriel Mountains is coincident with a series of east-west trending, predominantly reverse and thrust faults known as the Transverse Ranges frontal fault system. The San Fernando fault of this system ruptured during the 1971 magnitude (M) 6.7 San Fernando earthquake. The Cucamonga fault of this system is located at the base of the eastern San Gabriel Mountains, approximately 22-1/2 kilometers (14 miles) north-northwest of the site. Evidence of recent activity on this fault includes fresh scarps, sag ponds, and disrupted Holocene alluvium (Dutcher and Garrett, 1963; Yerkes, 1985; Morton and Yerkes, 1987).

The Chino-Central Avenue fault is located approximately 24 kilometers (15 miles) west-southwest of the site. This fault branches from a junction with the Elsinore fault zone southwest of Corona and trends northwest along the eastern flank of the Chino Hills. The Chino-Central Avenue fault is estimated to have a slip rate of 1.0 mm/yr and is assigned a maximum magnitude of 6.7 (Cao and others, 2003).

The San Andreas fault zone is located along the southwest margin of the San Bernardino Mountains, approximately 24 kilometers (15 miles) northeast of the site. The toe of the mountain front in the San Bernardino area roughly demarcates the presently active trace of the San Andreas fault, which is characterized by youthful fault scarps, vegetational lineaments, springs, and offset drainages. The Working Group on California Earthquake Probabilities (1995) tentatively assigned a 28 percent (±13 percent) probability to a major earthquake occurring on the San Bernardino Mountains segment of the San Andreas fault between 1994 and 2024.

The Glen Ivy segment of the Elsinore fault zone is located approximately 24-1/2 kilometers (15 miles) southwest of the site. The Elsinore fault zone is composed of multiple *en echelon* and diverging fault traces and splays into the Whittier and Chino faults to the north. In addition to being a zone of overall right-lateral deformation consistent with the regional plate tectonics, traces of the Elsinore fault zone

form the graben of the Elsinore and Temecula Valleys. Holocene surface rupture events have been documented for several principal strands of the Elsinore fault zone (Saul, 1978; Rockwell and others, 1986; Wills, 1988).

HISTORICAL EARTHQUAKES

A map of recorded earthquake epicenters is included as Enclosure "A-4" (Epi Software, 2000). This map includes the Cal Tech database for earthquakes with magnitudes of 4.0 or greater from 1932 through 2008.

The Working Group on California Earthquake Probabilities (1988) lists seven **M** 6.0 or greater earthquakes that have occurred on the San Jacinto fault since 1899, although they acknowledge that several of these earlier episodes may have occurred on other nearby faults. Two of these earthquakes took place in the San Bernardino Valley. A **M** 6.5 event in 1899 near Lytle Creek and a **M** 6.2 event in 1923 near Loma Linda may have occurred on the San Jacinto fault. However, Fife and others (1976) and Matti and Carson (1991) suggest that the 1923 event took place on an unnamed fault parallel to and east of the San Jacinto fault.

A large historical earthquake that is definitely attributed to the Elsinore fault was a **M** 6.0 event in 1910 in the Temescal Valley area. This event caused damage to structures from Corona to Wildomar (Weber, 1977). Since 1932, four **M** 4.0 or greater earthquakes have occurred along the Elsinore fault zone in the Santiago Peak area (Weber, 1977).

No large earthquakes have occurred on the San Bernardino Mountains segment of the San Andreas fault within the regional historical time frame. Using dendrochronological evidence, Jacoby and others (1987) inferred that a great earthquake on December 8, 1812 ruptured the northern reaches of this segment. Recent trenching studies have revealed evidence of rupture on the San Andreas fault at Wrightwood within this time frame (Fumal and others, 1993). Comparison of rupture events at the Wrightwood site and Pallett Creek, and analysis of reported intensities at the coastal missions, led Fumal and others (1993) to conclude that the December 8, 1812 event ruptured the San Bernardino Mountains segment of the San

Andreas fault largely to the southeast of Wrightwood, possibly extending into the San Bernardino Valley. The average recurrence interval for large earthquakes along the southern San Andreas fault at six paleoseismic sites is 182 years (Stone and others, 2005).

Surface rupture occurred on the Mojave segment of the San Andreas fault in the great 1857 Fort Tejon earthquake. The Coachella Valley segment of the San Andreas fault was responsible for the 1948 **M** 6.5 earthquake in the Desert Hot Springs area and for the 1986 **M** 5.6 earthquake in the North Palm Springs area.

No significant historical earthquakes have been specifically attributed to the Cucamonga or Chino-Central Avenue faults in the general area of the site.

SITE-SPECIFIC GROUND MOTION ANALYSIS

DESIGN ACCELERATION PARAMETERS:

Based on the geologic setting and anticipated earthwork for construction of the proposed project, the soils underlying the site are classified as Site Class D, "stiff soil", according to the 2007 California Building Code (CBC). The seismic parameters according to the 2007 CBC are summarized in the following table. The Design Acceleration Parameters were determined according to the procedure outlined in ASCE 7-05 21.4 and are summarized in the table below.

2007 California Building Code - Seismic Parameters	
Mapped Spectral Acceleration Parameters	$S_s = 1.50$ and $S_1 = 0.60$
Site Coefficients	$F_a = 1.0$ and $F_v = 1.5$
Adjusted Maximum Considered Earthquake (MCE) Spectral Response Parameters	$S_{MS} = 1.50$ and $S_{M1} = 0.90$
Design Spectral Acceleration Parameters	$S_{DS} = 1.00$ and $S_{D1} = 0.60$

The corresponding value of PGA from the design acceleration spectrum according to the 2007 CBC is 0.40g.

GROUNDWATER AND LIQUEFACTION

The site is located in Section 23 of Township 2 South, Range 5 West, in the Riverside-Arlington Subbasin of the Upper Santa Ana Valley groundwater basin. Relatively recent depth to groundwater data in the vicinity of the site is available from the Western Municipal Water District, Cooperative Well Program (2007), and the State of California Water Resources Control Board (2007). These data are summarized in the following table.

Well No./ID	Date Measured	Depth to Water (meters/feet)	Approximate Water Surface Elevation (meters/feet)	Location of Well/Boring
02S/05W-23N (21 Monitoring Wells)	05-22-07	19.7 / 64.5	233/766	650' NE
02S/05W-26E002S	03-28-06	14.8 / 48.7	234/768.2	~2,200' S
02S/05W-26F001S	04-28-06	14.4 / 47.1	233/763.8	~2,800' SE
02S/05W-26G001S	02-15-05	32.7 / 107.4	235/769.2	~3,700' SE

Based on published groundwater con our mapping by Carson and Matti (1985), the minimum depth to groundwater in the area of the site was approximately 30 feet bgs for the time period from 1973 to 1979. Based on the available data, a histori high groundwater of 20 feet bgs was utilized in our analyses.

The site is located within an area designated by the City of Riverside (2004) as being underlain by soils with a "moderate" liquefaction potential. Liquefaction is a process in which strong ground shaking causes saturated soils to lose their strength and behave as a fluid (Matti and Carson, 1991). Ground failure associated with liquefaction can result in severe damage to structures. The geologic conditions for increased susceptibility to liquefaction are: 1) shallow groundwater (generally less than 50 feet in depth), 2) the presence of unconsolidated sandy alluvium, typically Holocene in age, and 3) strong ground shaking. All three of these conditions must be present for liquefaction to occur.

Due to the potential for the presence of shallow groundwater beneath the site and the potential for strong ground shaking, the liquefaction potential of the site has been evaluated using the procedure described by Seed and Idriss (1982), Seed and others (1985), and as recently modified by the National Center for Earthquake Engineering Research (Youd and Idriss, 2001). The method of evaluating liquefaction potential consists of comparing the cyclic stress ratio (CSR) developed in the soil by the earthquake motion to the CSR, or cyclic resistance ratio (CRR) that will cause liquefaction of the soil for a given number of cycles. In the simplified procedure, the CSR developed in the soil is calculated from a formula that incorporates ground surface acceleration, total and effective stresses in the soil at different depths (which in turn are related to the location of the ground-water table), non-rigidity of the soil column, and a number of simplifying assumptions.

The CRR that will resist liquefaction is related to the relative density of the soil, expressed in terms of SPT blowcounts (N_{60}), normalized for an effective overburden pressure of 1 ton per square foot $(N_1)_{60}$. A projected future groundwater depth of 20 feet bgs was utilized to calculate the liquefaction potential in the area. The PGA of 0.4g and an earthquake of magnitude 6.9 were utilized as input into the liquefaction analysis program GeoSuite (Yi, 2007).

Liquefaction potential has been evaluated for soil profiles from Exploratory Boring Nos. 1 and 2 (ring samplers) and 4 and 5 (SPT samplers) using the above-mentioned groundwater depth. Due to the relative density of the underlying soils (below projected groundwater) as indicated by the SPT blowcounts (N_{60}), our calculations indicate potential for liquefaction in Exploratory Boring Nos. 1, 2 and 5 at depths between approximately 20 and 33 feet. The detailed graphic results are included in Enclosures "D-1" through "D-4" and text lists in Enclosures "D-5" through "D-8".

Examination of the liquefaction analysis results indicates that the maximum thickness of the liquefiable layer (H2) was approximately 9 feet. According to Ishihara (1985), the surface manifestation of liquefaction (such as boils, ground fissure, etc.) can be minimized by an adequate thickness of the non-liquefiable crust (H1) at the site. For the thickness of the liquefiable layer (H2) of 9 feet, Ishihara's charts indicate that the surface manifestation effects on the structure will be absent if the non-liquefiable crust is thicker than 24 feet, for a maximum ground acceleration of 0.4 g. For this site, the maximum

ground acceleration is 0.4 g, and the thickness of non-liquefiable crust varies from 20 to 26 feet. Based on these data, it is the opinion of this firm that surface manifestation effects of liquefaction on the structure should be anticipated.

SEISMIC SETTLEMENT AND SUBSIDENCE

Severe seismic shaking may cause dry sands to densify, resulting in settlement expressed at the ground surface. Seismic settlement in dry soils generally occurs in loose sands and silty sands, with cohesive and fine-grained soils being less prone to significant settlement. For saturated soils, significant settlement is anticipated if the soils liquefy during seismic shaking. Soil types susceptible to liquefaction include sand, silty sand, sandy silt, silt, as well as clayey soils with a plastic index (PI)<12 and moisture content > 85 percent of the liquid limit (Bray and Sancio, 2008; CGS, 2008).

The seismic settlement was evaluated for the soil profiles from Exploratory Boring Nos. 1 and 2 (ring samplers) and 4 and 5 (SPT samplers) for the site. Using the method outlined by Pradel (1998) and Tokimatsu, et al. (1987), calculations were performed to estimate the maximum and differential settlement to be anticipated as a result of a major seismic event. As input into our calculations, a de-aggregated modal moment magnitude of 6.9 and a PGA of 0.4g were utilized. The results indicate an anticipated maximum seismic settlement of approximately 0.4 to 2.1 inches for the proposed parking garage site for site soils in their present condition. The maximum differential settlement was estimated to be less than 1/480. The detailed results are included in Enclosures "D-9" through "D-24".

The site is not located within an area of documented subsidence due to fluid withdrawal (oil, gas, or water resources). Therefore, subsidence is not anticipated in the area of the site.

HYDROCONSOLIDATION

Density testing and equivalent SPT data from our exploratory borings indicates that the soils encountered were in loose to medium dense or soft to medium stiff states and are thus considered to be of moderate hydroconsolidation potential.

To evaluate the potential deformation which may be caused by the addition of water, hydroconsolidation tests were performed on selected representative relatively undisturbed samples. The results are shown in Enclosure "C-5".

The results of these tests show that a maximum hydroconsolidation strain of approximately 1.8 percent could be developed in the upper loose silty sands. This could result in hydroconsolidation settlement of approximately 4-1/2 inches if the loose soils at the site become fully saturated. Considering the possibility of full saturation, a maximum hydroconsolidation settlement of approximately 2 inches and a hydroconsolidation differential settlement of approximately 1 inch are anticipated for site soils in their existing condition.

SLOPE STABILITY

The site top graphy includes an approximately 35-foot-high slope descending west from the area of the existing church to a lower elevation defined by the lower of the two existing parking levels. The areas at the top and toe of this slope are relatively planar. The original slope is likely the result of stream incision of an older alluvial fan surface that has formed a relatively flat-bottomed arroyo with a veneer of younger alluvium and slope-deposited colluvium adjacent to a relatively higher older alluvial fan surface. The existing site topography and slope configuration likely resulted from grading performed during construction of the existing parking areas.

No evidence of landsliding was observed on the site, and landsliding is not anticipated.

Temporary excavations for construction of the proposed parking structure and surface parking area may expose alluvium that is prone to localized raveling. The relatively flat-lying older alluvial fan deposits underlying the slope do not contain well-developed planes of weakness such as bedding or joints that may be prone to landsliding. Based on the results of our liquefaction calculations and observations at the site, landslides and lateral spreading are not considered to be a hazard to the site.

FLOODING AND EROSION

No evidence of recent flooding of the ite or surrounding area was observed during the geologic mapping or on the aerial photographs reviewe l. The site is located in an area designated by FEMA (1996) as "Zone C", area with minimal flood hazard. The site is located outside of the FEMA 100-year flood zone (City of Riverside, 2004). An evaluat n of the hazard of flooding to the site and the adequacy of existing flood control measures near the site f ll outside the purview of this firm.

According to the City of Riverside General Plan (2004), the site is not located within a potential inundation zone for seismically-induced dam/reservoir failure. No large water storage facilities are known to exist within the area of the site; therefore, the potential for seismically-induced dam failure or seiche to affect the site appears low. The site is not located within a coastal area; therefore, tsunami is not a potential hazard to the site.

CONCLUSIONS

On the basis of our research and field and laboratory investigations, it is the opinion of this firm that construction of the proposed parking garage is feasible from a geotechnical standpoint, provided the recommendations contained in this report are implemented during planning, grading, and construction.

No evidence of active faulting was observed on or adjacent to the site.

Moderate to severe seismic shaking of the site can be expected during the lifetime of the proposed structure.

Fill was encountered within most of the exploratory borings to a maximum depth of 6 feet bgs.

Groundwater was encountered within our exploratory borings at depths ranging from approximately 27 to 29 feet bgs. Based on the relative density exhibited by the underlying granular soils (below project groundwater), our calculations indicate potential for liquefaction in Exploratory Boring Nos. 1, 2 and 5 at depths between approximately 20 and 33 feet.

A maximum seismic-induced settlement of approximately 2.1 inches is anticipated. The maximum differential seismic-induced settlement is estimated to be less than 1/480.

Consolidation testing performed on selected samples indicate that the on-site surficial soils have a moderate potential for hydroconsolidation (collapse) upon application of a surcharge load and inundation with water.

All of our current exploratory borings experienced slight caving upon removal of the drilling augers.

Bedrock was not encountered in any of the exploratory borings.

Refusal was experienced in most of our exploratory borings at depths ranging from 21-1/2 feet to 90 feet bgs.

No evidence of recent significant flooding of the site was observed during the geologic field reconnaissance or on the aerial photographs reviewed. The site is located adjacent to and along the bottom of the Tequesquite Wash. An evaluation of the flood potential of the site falls under the purview of others.

Conditions conducive to landsliding were not observed at the site.

Materials tested during this investigation exhibited a "low" potential for expansion in accordance with the 2007 CBC, Section 1802.3.2.

Based upon our field investigation and test data, it is our opinion that the upper undocumented fill and loose native soils will not, in their present condition, provide uniform or adequate support for the proposed parking garage and surface parking areas. Our equivalent SPT data and density testing results indicated variable in-situ conditions of the upper soils to 28 feet in depth, ranging from very loose to medium dense and from soft to medium stiff. Evaluation of the maximum dry density of soils encountered indicates that the existing native soils generally have a relative compaction of approximately 85 to 90 percent.

Based on the site conditions, it is our recommendation that the proposed parking garage and other structures be supported on one of the following foundation systems: 1) pile foundations or 2) conventional shallow foundations on compacted fill with removal and recompaction of loose soils.

Because of the site conditions, it will be necessary to remove, at a minimum, the upper 36 inches of existing soils in all areas to be graded, regardless of the foundation type selected. This removal is to be performed in order to locate and facilitate removal of undocumented fill, debris, or loose and disturbed soils. The extent and depth of removal should be confirmed by an engineering geologist from this firm during grading.

The proposed grading is expected to be feasible utilizing conventional heavy grading equipment.

RECOMMENDATIONS

DESIGN A:

The Design Acceleration Parameters were determined according to the procedure outlined in ASCE 7-05 21.4 and are summarized in the table below.

2007 California Building Code - Seismic Parameters	
Mapped Spectral Acceleration Parameters	$S_s = 1.50$ and $S_1 = 0.60$
Site Coefficients	$F_a = 1.0$ and $F_v = 1.5$
Adjusted Maximum Considered Earthquake (MCE) Spectral Response Parameters	$S_{MS} = 1.50$ and $S_{M1} = 0.90$
Design Spectral Acceleration Parameters	$S_{DS} = 1.00$ and $S_{D1} = 0.60$

The corresponding value of PGA from the design acceleration spectrum according to the 2007 CBC is 0.40g.

Moderate to severe seismic shaking of the site can be expected during the lifetime of the proposed improvements. Therefore, the proposed structure should be designed accordingly.

Based on the geological setting and subsurface data from the site, the soils underlying the site are classified as Site Class D, "stiff soil profile", according to the 2007 CBC.

GENERAL SITE GRADING:

It is imperative that no clearing and/or grading operations be performed without the presence of a representative of the geotechnical engineer. An on-site, pre-job meeting with the project owner, the contractor, and the geotechnical engineer should occur prior to all grading-related operations. Operations undertaken at the site without the geotechnical engineer present may result in exclusions of affected areas from the final compaction report for the project.

Grading of the subject site should be performed, at a minimum, in accordance with these recommendations and with applicable portions of the 2007 CBC. The following recommendations are presented for your assistance in establishing proper grading criteria.

INITIAL SITE PREPARATION:

All areas to be graded should be stripp
materials should be removed from th

Any existing pockets of undocumented fill or loose disturbed soils encountered during construction should be completely removed, cleaned of significant deleterious materials, and may be reused as compacted fill. Any roots or other deleterious materials encountered at this time should be removed prior to replacing the soil.

To assist in undocumented fill and/or loose native soil identification and removal, it is our opinion that all areas to be graded should be subexcavated to a minimum depth of 36 inches bgs. Depending on the foundation type selected, further removal may be necessary. If conventional shallow foundations are utilized, all loose material in the parking garage building pad area should be completely removed. Removal depths on the order of 20 to 25 feet may be necessary. Within the area of proposed surface parking, it is anticipated that removal depths will range from approximately 5 to 10 feet. The removal should extend beyond the footing at the bottom of the excavation to a distance equal to the depth of removal plus 10 feet, where possible. An engineering geologist from this firm should be present during

the subexcavation operation prior to scarification and refilling in order to identify existing fills or loose soils extending below this zone. A relative compaction of at least 85 percent may be utilized as preliminary quantitative criteria to supplement the engineering geologist's qualitative determination of suitable base of excavation. The bottoms of all excavations should be observed and approved by the engineering geologist. Anticipated removal depths at each boring location are shown on Enclosure "A-2".

In addition, it is our recommendation that all existing undocumented fills and loose soils under any proposed paved and flatwork areas be removed and replaced with properly compacted and controlled fills. If this is not done and any undocumented fills are left, premature structural distress of the paved and flatwork areas can be expected. However, the additional cost of mandatory subexcavation, complete undocumented fill, and loose soil removal should be compared to the higher ongoing maintenance costs and other problems caused by distressed paved and flatwork areas. It is our opinion that decreased settlement will result from increasing the amount of undocumented fill and loose soils removed, with complete removal of all undocumented fill and loose soil being the upper limit on reasonable efforts to minimize settlement. An economic analysis of the relationship between current construction costs and ongoing maintenance costs could be undertaken to determine the most cost-effective amount of undocumented fill and loose soil to be removed.

Cavities created by removal of subsurface obstructions should be thoroughly cleaned of loose soil, organic matter, and other deleterious materials, shaped to provide access for construction equipment, and backfilled as recommended for site fill.

COMPACTED FILLS:

The on-site soils should provide adequate quality fill material, provided they are free from roots, other organic matter, and deleterious materials. Unless approved by the geotechnical engineer, rock or similar irreducible material with a maximum dimension greater than 8 inches should not be buried or placed in fills.

Import fill should be inorganic, non-expansive granular soil free from rocks or lumps greater than 6 inches in maximum dimension. Sources for import fill should be observed and approved by the geotechnical engineer prior to their use.

Fill should be spread in near-horizontal layers, approximately 8 inches in thickness. Thicker lifts may be approved by the geotechnical engineer if testing indicates that the grading procedures are adequate to achieve the required compaction. Each lift should be spread evenly, thoroughly mixed during spreading to attain uniformity of the material and moisture in each layer, brought to between optimum moisture content and 2 percent above, and compacted to a minimum relative compaction of 95 percent in accordance with the current version of ASTM D 1557.

SHRINKAGE AND SUBSIDENCE:

Based upon the relative compaction of the soils tested during this investigation, and the relative compaction anticipated for compacted fill soils, we estimate a compaction shrinkage of approximately 10 to 15 percent. Therefore, 1.10 cubic yards to 1.15 cubic yards of in-place soil material would be necessary to yield 1 cubic yard of properly compacted fill material. In addition, we would anticipate subsidence of approximately 0.1 to 0.15 foot. These values are exclusive of losses due to stripping or the removal of other subsurface obstructions, if encountered, and may vary due to differing conditions within the project boundaries and the limitations of this investigation.

Values presented for shrinkage and subsidence are estimates only. Final grades should be adjusted, and/or contingency plans to import or export material should be made to accommodate possible variations in actual quantities during site grading.

DEWATERING:

Groundwater was encountered within Exploratory Boring Nos. 1, 2, 4, and 5 at approximate depths of 27 feet to 29 feet. Dewatering might be necessary during construction. The contractor should be solely responsible for the dewatering system design and installation. Design of such a system should be developed based on the anticipated groundwater level at the time of construction and pumping tests carried out prior to construction.

LATERAL LOADING:

Resistance to lateral loads will be provided by passive earth pressure and base friction. For footings bearing against compacted fill, passive earth pressure may be considered to be developed at a rate of 380 pounds per square foot (psf) per foot of depth. Base friction may be computed at 0.40 times the normal load. Base friction and passive earth pressure may be combined without reduction, but should not be increased by one-third during seismic loadings. If the design is to be based on allowable lateral resistance values, we recommend that minimum factors of safety of 1.5 and 2.0 be applied to the friction coefficient and passive lateral earth pressure, respectively. The resulting allowable lateral resistance values are: passive lateral earth pressure, 190 psf per foot of depth; and base friction coefficient, 0.27.

For preliminary retaining wall design purposes utilizing the existing on-site native and fill materials, a lateral active earth pressure developed at a rate of 45 psf per foot of depth should be utilized for unrestrained conditions. For restrained conditions, an at-rest earth pressure of 65 psf per foot of depth should be utilized. The "at-rest" condition applies toward braced walls which are not free to tilt. The "active" condition applies toward unrestrained cantilevered walls where wall movement is anticipated. The structural designer should use judgement in determining the wall fixity and may utilize values interpolated between the "at-rest" and "active" conditions where appropriate. These values should be verified prior to construction when the backfill materials and conditions have been determined. These values are applicable only to level properly drained backfill with no additional surcharge loadings and do not include a factor of safety other than conservative modeling of the soil strength parameters. If import material is to be utilized for backfill, an engineer from this firm should verify the backfill has equivalent or superior strength values. Toe bearing pressure for walls on soils not bearing against compacted fill as described earlier under PREPARATION OF FOOTING AREAS should not exceed CBC values.

For walls with a surcharge loading, the increase in active pressure can be calculated as the product of 0.32 and the surcharge load, q, (i.e., $0.32 \times q$) for level backfill. The increase in at-rest pressure can be calculated as the product of 0.48 and the surcharge load, q , (i.e., $0.48 \times q$). The resulting additional surcharge pressure should be applied to the wall as a rectangular distribution, from top to bottom.

Backfill behind retaining walls should consist of a soil of sufficient granularity that the backfill will properly drain. The granular soil should be classified per the Unified Soil Classified System as either a GW, GP, SW, SP, SW-SM, or SP-SM. Surface drainage should be provided to prevent ponding of water behind walls. A drainage system should be installed behind all retaining walls consisting of any of the following:

A 4-inch diameter perforated PVC (Schedule 40) pipe or equivalent at the base of the stem encased in 2 cubic feet of granular drain material per linear foot of pipe; or

2. Synthetic drains such as Enkadrain, Miradrain, Hydraway 300, or equivalent

Perforations in the PVC pipe should be 3/8-inch in diameter. Granular drain material should be wrapped with filter cloth to prevent clogging of the drains with fines. Walls should be waterproofed to prevent nuisance seepage. Water should outlet to an approved drain.

Foundation concrete should be placed in neat excavations with vertical sides, or the concrete should be formed and the excavations properly backfilled as recommended for site fill.

SEISMIC LATERAL EARTH PRESSURE:

Seismic earth pressure was evaluated for both cantilever-type and nonyielding-type walls. The latter generally refers to massive gravity walls founded on rock or basement walls braced at both top and bottom. For cantilever-type walls, the active seismic earth pressure was calculated using the Mononobe-Okabe ("M-O") (Okabe, 1926; Mononobe and Okabe, 1929) method. For nonyielding-type walls, the seismic earth pressure was estimated using the Wood (1973) method assuming a wall-to-wall space and height ratio (L/H) larger than 4.0 (Kramer, 1996). The pseudostatic horizontal acceleration coefficient (K_h) was assumed to be one-half of the peak ground acceleration of 0.4g. The pseudostatic vertical acceleration coefficient (K_v) was taken as one-half of K_h. For retaining walls with on-site soils as backfill, a unit weight of 125 pounds per cubic foot (pcf) and friction angle of 31 degrees were used in the calculation.

For level backfill, lateral seismic earth pressure components were evaluated as shown in the following table. Because Wood's solution amounts to a total lateral thrust that acts about 0.63 times the height of the wall above the base of the wall, we modified the active seismic earth pressure (for cantilever-type wall) to a total lateral thrust with the acting point as shown in the following table. In general, the active seismic earth pressure calculated by the M-O method is in an inverted triangular distribution, while the seismic earth pressure calculated by the Wood method approximates a parabolic distribution.

Seismic Earth Pressure

Seismic Earth Pressure	Cantilever Type Wall	Nonyielding Type Wall
ΔP_{eq} (lbf)	$7.5H^2$	$25H^2$
Thrust Point (ft.)*	$\frac{2}{3}H$	$0.63H$

where H is the height of the wall in feet

* above base of wall

EARTH PRESSURES WITH INCLINED BACKFILLS:

For inclined backfills with slope heights up to 5 feet and wall heights of 10 feet or more, the following active earth pressures may be utilized in the design.

Earth

Slope	Sl		
2(h):1(v)			
2.5(h):1(v)			
3(h):1(v)			

EXPANSIVE SOILS:

An Expansion Index (E.I.) test on a selected sandy silt material exhibited a "low" potential for expansion (E.I.=27). A hydro-consolidation test performed on the same material indicated slight hydroconsolidation potential when saturated. By evaluating both results, it is the opinion of this firm that no specialized construction procedures should be necessary. However, the 2007 CBC requires specific design provisions for buildings and structures founded on expansive soils, i.e. those soils with an expansion index of 20 or more. Typically, expansive soils of this nature are mitigated with use of posttensioned slabs, deep foundations that penetrate to a depth of near constant moisture, and/or removal of the expansive soils. This firm should be contacted for specific recommendations as foundation plans are developed. Additional evaluation of soils for expansion potential should be conducted by the geotechnical engineer during the grading operation.

CHEMICAL/CORROSIVITY TESTING:

A selected sample of materials were delivered to Schiff Associates for soil corrosivity testing. Laboratory testing consisted of pH, resistivity, and major soluble salts commonly found in soils. The results of the laboratory tests performed by Schiff Associates appear in Enclosure"C-12".

These tests have been performed to screen the site for potentially corrosive soils. Although C.H.J., Incorporated does not practice corrosion engineering, values from the soil tested are considered potentially "mildly" to "moderately" corrosive to ferrous metals at as-received and saturated conditions, respectively. Specific corrosion control measures, such as coating of pipe with non-corrosive material or alternative non-metallic pipe material, are considered to be needed if there is a potential for saturated soils.

Results of the soluble sulfate testing indicate a "negligible" anticipated exposure to sulfate attack. Based upon the criteria from Table 4.3.1. of the American Concrete Institute Manual of Concrete Practice (2000), no special measures, such as specific cement types, water-cement ratios, etc., will be needed for this "negligible" exposure to sulfate attack.

The soluble chloride content of the soils tested was at levels high enough to be of concern with respect to corrosion of reinforcing steel. The results should be considered in combination with the soluble chloride content of the hardened concrete in determining the effect of chloride on the corrosion of reinforcing steel.

C.H.J., Incorporated does not practice corrosion engineering. If further information concerning the corrosion characteristics, or interpretation of the results submitted herein are required, then a competent corrosion engineer could be consulted.

PRELIMINARY FLEXIBLE PAVEMENT DESIGN:

The following recommended structural sections were calculated based on traffic indices (T.I.s) provided in the Caltrans Highway Design Manual for Safety Roadside Rest Areas (Caltrans, 2008). Based upon our preliminary sampling and testing, the structural sections tabulated below should provide satisfactory AC pavement.

Usage	T.I.	R-value	Recommended Structural Section
Auto Parking Areas	5.0	12	0.25' AC/0.70' Class 2 AB
Auto Roads	5.5	12	0.25' AC/0.85' Class 2 AB
Truck Parking Areas	6.0	12	0.25' AC/1.00' Class 2 AB
Truck Roads	8.0	12	0.35' AC/1.35' Class 2 AB

AB=Aggregate Base

Recommended AC pavement sections for other T.I.s are tabulated in Enclosure "C-12".

The above structural sections are predicated upon proper compaction of utility trench backfill, if any, and subgrade soils, with the upper 12 inches of subgrade soils and all AB material brought to a relative compaction of at least 95 percent in accordance with ASTM D 1557 prior to paving. The AB should meet Caltrans requirements for Class 2 base.

It should be noted that the above pavement designs were based upon the results of preliminary sampling and testing performed on this project. Therefore, the values provided here should be verified by additional sampling and testing during construction when the actual subgrade soils are exposed.

PRELIMINARY RIGID PAVEMENT DESIGN:

Rigid pavement design for the subject project should be performed, at a minimum, in accordance with these recommendations and with applicable portions of ACI 330R "Guide for Design and Construction of Concrete Parking Lots". The following recommendations are based on an RV of 12.

Traffic Category	Average Daily Truck Traffic (ADTT)	Recommended Section
B	25	6.5" PCC/Compacted Soils
B	300	7.0" PCC/Compacted Soils
C	100	7.0" PCC/Compacted Soils
C	300	7.5" PCC/Compacted Soils
C	700	7.5" PCC/Compacted Soils
D	700	8.5" PCC/Compacted Soils

The above recommended concrete sections are based on a design life of 20 years, a concrete 28-day compressive strength of approximately 3,500 psi, and a flexural strength of approximately 500 psi. In addition, the above structural sections are predicated upon proper compaction of the utility trench backfills and the subgrade soils, with the upper 12 inches of subgrade soils brought to a uniform relative compaction of 95 percent (ASTM D 1557).

The concrete sections may be placed directly over a compacted subgrade, prepared as described above. The concrete to be utilized for the concrete pavement should have a minimum modulus of rupture of 500 pounds per square inch (psi). This equates to a 28-day compressive strength of approximately 3,500 psi. However, the design strength should be based upon the modulus of rupture and not the compressive strength. Transverse joints should be sawcut in the pavement at approximate 12-foot intervals within 12 hours of concrete placement, or preferably sooner. Sawcut depths should be equal to approximately one-quarter of the slab thickness. The use of plastic strips for formation of jointing is not recommended. The

use of expansion joints is not recommended, except where the pavement will adjoin structures. Construction joints should be constructed such that adjacent sections butt directly against each other and are keyed into each other. Parallel pavement sections should also be keyed into each other. It should be noted that distributed steel reinforcement (welded wire fabric) is not necessary, nor will any decrease in section thickness result from its inclusion.

It has been assumed that concrete shoulders will be utilized. Concrete shoulders reduce the necessary thickness of concrete pavement. If concrete shoulders are not utilized and vehicles are permitted to drive over the edge of pavements, the thickness of pavement will need to be increased approximately 1-1/2 inches.

C.H.J., Incorporated does not practice traffic engineering. The T.I. and ADTT values used to develop the recommended pavement sections are typical for projects of this type. We recommend that the T.I. and ADTTs used be reviewed by the project civil engineer or traffic engineer to verify that they are appropriate for this project.

It should be noted that the above pavement designs were based upon the results of preliminary sampling and testing performed on this project. Therefore, the values provided here should be verified by additional sampling and testing during construction when the actual subgrade soils are exposed.

SHALLOW FOUNDATION RECOMMENDATIONS

The proposed parking garage structures, retaining walls, and other site improvements may be supported by shallow foundations, including conventional spread footings and grade beams, provided the recommendations contained in this report are implemented during planning, grading, and construction.

PREPARATION OF FOOTING AREAS:

If shallow foundations are utilized, all footings should rest upon at least 5 feet of properly compacted fill material. Shallow foundations constructed within the parking garage building pad area should be underlain by additional compacted fill, as necessary, such that the fill thickness is at least equal to the footing width. In areas where the required thickness of compacted fill is not accomplished by the

mandatory subexcavation operation and by site rough grading, the footing areas should be subexcavated to a depth of at least 5 feet below the proposed footing base grade or a depth equal to the footing width, as appropriate. The subexcavation should extend horizontally beyond the footing lines a distance equal to the depth of removal below the bottom of the footing plus 10 feet, or a distance equal to two times the footing width plus 5 feet, whichever is greater. This distance should be measured at the bottom of the excavation. This subexcavation operation should include a minimum of the upper 36 inches of soils even though planned filling will be sufficient to satisfy compacted fill thickness requirements. The bottom of this excavation should then be scarified to a depth of at least 12 inches, brought to between optimum moisture and 2 percent above, and recompacted to at least 95 percent relative compaction in accordance with the current version of ASTM D 1557 prior to refilling the excavation to grade as properly compacted fill.

Should grading result in fill thicknesses that vary by a significant amount, a potential for static differential settlement will exist. As such, it is our recommendation that the thickness of fill not be allowed to vary by more than 50 percent, 10 feet maximum, across any structure. If fill thicknesses are to vary by more than 50 percent or 10 feet as a result of grading, it will be necessary to increase the removals in the cut portion of the building pad in order to construct a fill mat with a relatively uniform fill thickness.

FOUNDATION DESIGN:

If removal and replacement is chosen as the method of remediation, and the site is prepared as recommended, the proposed structures may be safely founded on conventional spread foundations, either individual spread footings and/or continuous wall footings. Footings should be a minimum of 12 inches wide and should be established at a minimum depth of 12 inches below the lowest adjacent final subgrade level. For the minimum width and depth, footings may be designed for a maximum safe soil bearing pressure of 2,325 psf for dead plus live loads. This allowable bearing pressure may be increased by 425 psf for each additional foot of width, and by 925 psf for each additional foot of depth, to a maximum safe soil bearing pressure of 3,725 psf for dead plus live loads. These bearing values may be increased by one-third for wind or seismic loading.

For footings thus designed and constructed, we would anticipate a maximum static settlement of 1 inch or less. Differential settlement between similarly loaded adjacent footings is expected to be approximately one-half the total settlement. These settlement estimates do not include seismically-induced settlement.

Foundation concrete should be placed in neat excavations with vertical sides, or the concrete should be formed and the excavations properly backfilled as recommended for site fill.

SLABS-ON-GRADE:

To provide adequate support, concrete slabs-on-grade should bear on a minimum of 12 inches of compacted soil. Concrete slabs-on-grade should be a minimum of 4 inches in thickness. The soil should be compacted to 95 percent relative compaction. The final pad surfaces should be rolled to provide smooth dense surfaces.

Slabs to receive moisture-sensitive coverings should be provided with a moisture vapor retarder. We recommend that a vapor retarder be designed and constructed according to the American Concrete Institute (ACI) 302.1R, Concrete Floor and Slab Construction guidelines, which addresses moisture vapor retarder construction. At a minimum, the vapor retarder should comply with ASTM E 1745 and have a nominal thickness of at least 10 mils. The vapor retarder should be properly sealed per the manufacturer's recommendations and protected from punctures and other damages. Two inches of sand under the vapor retarder may assist in reducing punctures.

Concrete building slabs subjected to heavy loads, such as materials storage and/or forklift traffic, should be designed by a registered civil engineer competent in concrete design.

A modulus of vertical subgrade reaction of 125 pounds per cubic inch may be utilized in the design of slabs-on-grade for the proposed project.

DEEP FOUNDATION RECOMMENDATIONS

As an alternative to using shallow foundations (with the necessary removal and recompaction), the parking structure and other site improvements could be supported by pile foundations. For purposes of our analyses, a concrete cast-in-drilled-hole (CIDH) pile foundation was assumed in order to develop preliminary conclusions regarding pile capacity and depth. Alternative pile foundations could include driven pre-cast concrete or steel H piles. Pile-type selection should be based on environmental considerations, constructability, and cost. Pile driving will induce localized ground vibration and is generally much noisier than CIDH construction. Groundwater may be a concern during CIDH pile installation. See the section entitled CIDH PILE INSTALLATION.

The pile calculations were based on assumed 24-inch and 36-inch-diameter CIDH piles, with a targeted allowable vertical capacity of 200 kilo-pounds (kips), for the proposed parking garage structure.

ALLOWABLE AXIAL PILE CAPACITIES:

Both upward and downward allowable axial capacities were calculated (Allpile Version 7.8e) for concrete CIDH piles as a function of embedment depth. The embedment depths shown on the capacity vs. depth charts (Enclosures "E-3", "E-4", "E-13", and "E-14") are measured from the bottom of the pile cap, which has been assumed to be approximately 3 feet bgs. Greater or lesser pile cap elevations should result in a corresponding decrease or increase in pile depth. Strength reduction caused by liquefaction was considered for liquefiable layers using strength reduction factors included in the output of liquefaction analysis results. Above the liquefiable layer, down drag force was accounted for, based on the seismic settlement results.

The recommended capacities apply to the total of dead plus live loads and are gross values at the pile head. Both ultimate and allowable capacities are presented in Table 1. The design engineer should select capacities according to the design method selected. If the "strength design" method is selected, ultimate capacities should be utilized. Alternatively, if the "working stress design" method is used, allowable capacities should be selected. The nominal resistance is provided for use in LRFD design. The design engineer should apply performance factors in accordance with corresponding design specifications.

The maximum allowable downward capacity utilized a factor of safety of 2.0 for skin friction and 2.5 for tip bearing. The maximum allowable uplift capacity utilized a factor of safety of 3.0 for skin friction and 1.0 for pile weight. Utilizing these values, the combined dead plus live loads should be limited to the values presented in Table 1. We have also included ultimate downward capacities for piles should calculations utilizing other factors of safety be desired. These capacities may be increased by one-third for wind or seismic loading. The capacities provided are based on soil strengths. Structural capacities of piles must be verified by the design engineer.

The pile lengths shown in Table 1 are minimum values and are based on the assumption that the top of the pile will be approximately 3 feet bgs and the requirement that the pile tip should penetrate at least 3 pile diameters or 10 feet, whichever is greater, into the underlying non-liquefied layer. It should be noted that practical refusal may be achieved prior to reaching the minimum depth of embedment. Stopping the pile short of the minimum depth of embedment will reduce pile capacity during a seismic event.

For properly-installed piles, it is anticipated that a total settlement of 1/4 inch will be required to mobilize a target allowable capacity of 200 kips.

LATERAL PILE ANALYSES:

As part of our lateral pile capacity evaluation, we analyzed the behavior of CIDH piles embedded into the representative soil profiles in the proposed structure areas for both free and fixed head conditions. In each case, base shear forces were applied at the top of the pile which was assumed to be at the bottom of the footing. The graphed results, showing pile deflection and force distribution and lateral load vs. head deflection or maximum moment, are included in Enclosures "E-5" through "E-8" for 24-inch CIDH piles and "E-15" through "E-18" for 36-inch CIDH piles. Based on these results, we have estimated the allowable lateral loads, considering Section 1808.2.9.3 of the 2007 CBC.

The structural engineer should use judgment when modeling the degree of fixity. If a "semi-fixed" condition is considered, the lateral deflections should be re-estimated.

Section rigidities (E.I.) of 4.88×10^7 and 2.47×10^8 kip·in^2 were utilized for 24- and 36-inch CIDH piles, respectively.

TABLE 1

AXIAL AND LATERAL PILE CAPACITIES

	Item		
	Pile Diameter (in.)	24	36
	Minimum Length of Pile (ft.)	50	43
Vertical Capacities	Ultimate Downward Capacity (kips)	468	907
	Ultimate Uplift Capacity (kips)	164	207
	Nominal Downward Resistance (kips)	272	504
	Nominal Uplift Resistance (kips)	87	122
	Allowable Downward Capacity (kips)	205	378
	Allowable Uplift Capacity (kips)	66	92
Lateral Capacities	Ultimate*, Free Head	70	133
	Nominal, Free Head	46	88
	Allowable, Free Head	35	66
	Ultimate*, Fixed Head	165	328
	Nominal, Fixed Head	110	218
	Allowable, Fixed Head	82	164

*Assumed a maximum lateral deflection of 1 inch at pile head

PILE SPACING AND GROUP EFFICIENCY:

Both axial and vertical capacities recommended in the above sections are for single piles. In the case of grouped piles, the total capacity will be subjected to pile spacing. For axial capacities, the group efficiency (η) should be > 0.7 for spacing = 3B, increasing linearly to 1.0 for spacing = 6B, where B is the pile diameter or width. $\eta = 0.7$ for spacing $\leq$3B. For lateral capacities, McClelland (1972) suggested

that η should be = 1.0 for spacing $\geq$ 8B and that η should decrease linearly to 0.7 at a spacing = 3B. The following publications can be referenced for the group efficiency necessitated to be considered in the design of group piles.

AASHTO, 2007, *LRFD Bridge Design Specifications*, 4th Edition

Caltrans, 2000, *Bridge Design Specifications*, Section 4, Foundations.

Coduto, Donald P., 1994, *Foundation Design, Principles and Practices*, Prentice-Hall

FHWA, 1999, Drilled Shafts: *Construction Procedures and Design Methods*, Publication No. FHWA-IF-99-025

U.S. Army Corps. of Engineers, 1998, *Design of Deep Foundations*, Chapter 5, TI 818-02

CIDH PIL :

The installa es should be observed by the geotechnical engineer to verify the soil condition and that the desired diameter and depth of pile are achieved. CIDH piles should be true and plumb.

Because of the granular nature of the soils encountered and the anticipated diameter of the drilled holes, it is anticipated that caving could occur during the drilling and the construction of piles within the on-site soils. Appropriate precautions should therefore be taken during the construction of piles to reduce caving and raveling.

The drilling speed should be reduced as necessary to minimize vibration and caving of the sandy materials. Based on the data developed during our investigation, drilling for the piles may proceed without the need for casing. However, should caving soils be encountered, the contractor should be prepared to use casing or other approved means to prevent caving.

Based on the recommended pile length, groundwater will likely be encountered during drilling for piles. The slurry-displacement method of pile construction should be considered to keep the borehole stable below groundwater.

Closely spaced piles should be drilled and filled alternately, allowing the concrete to set at least eight hours before drilling the adjacent pile. All excavations should be filled with concrete as soon after drilling as possible. In no event should pile holes be left open overnight. The concrete should be placed with appropriate equipment, so that the concrete is not allowed to fall freely more than 5 feet, and to prevent concrete from striking the walls of the shaft, thus causing caving. All loose materials should be cleared from the bottom of the pile excavation. This is especially important because end bearing has been considered in determining the provided pile capacities. If casing is necessary and is utilized, then the casing should be withdrawn concurrently with the concrete placement.

Prior to concrete placement, any disturbed soils under and within the area of the grade beams or at the sides of pile caps should be compacted to at least 95 percent relative compaction (ASTM D 1557).

PAVEMENT AND HARDSCAPE:

Concrete slabs should be structurally supported by the pile and grade-beam foundation. Pavement and hardscape, such as driveways and sidewalks which are not structurally supported, should be designed to resist the effects of settlement.

PRELIMINARY SHORING RECOMMENDATIONS

GENERAL:

We anticipate that temporary shoring may be required during excavation for the proposed parking garage and surface parking area. The following recommendations are preliminary and may require revision for final design. The contractor should be responsible for final shoring design and for providing adequate excavation support.

LATERAL PRESSURES:

For design of cantilevered shoring, a triangular distribution of lateral earth pressure may be used. It may be assumed that the retained soils with a level surface behind the cantilevered shoring will exert a lateral pressure equal to that developed by a fluid with a density of 45 pounds pcf.

For the design of tied-back or braced shoring, we recommend the use of a rectangularly distributed apparent earth pressure for calculating the total load. The recommended pressure distribution, for the case where the grade is level behind the shoring, is illustrated in Enclosure "D-25"(e), with the maximum pressure equal to 30H in pounds per square foot (psf), where H is the height of the shoring in feet. The design engineer should refer to FHWA-IF-99-015 for the recommended apparent earth pressure diagram.

In addition to the recommended earth pressures, the upper 10 feet of shoring adjacent to streets or other vehicular traffic areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 320 psf surcharge behind the shoring due to the normal street traffic. If the traffic is kept back at least 10 feet from the shoring, the traffic surcharge may be neglected.

Shoring adjacent to existing buildings should be designed to support the lateral surcharge pressure from existing building foundations, or the foundations should be underpinned.

DESIGN OF SOLDIER PILES:

For the design of soldier piles spaced a minimum of two diameters on center, the allowable lateral bearing value (passive value) of the soils below the level of excavation may be assumed to be 380 psf per foot of depth below the excavated surface, up to a maximum of 4,000 psf. To develop the full lateral value, provisions should be taken to assure firm contact between the soldier piles and the undisturbed soils. The concrete placed in the soldier pile excavations may be a lean-mix concrete. However, the concrete used in that portion of the soldier pile which is below the planned excavated level should be of sufficient strength to adequately transfer the imposed loads to the surrounding soils. Provided that the portion of the soldier piles below the excavated level is backfilled with structural concrete, the soldier piles below the excavated level may be used to resist downward loads. The frictional resistance between the concrete soldier piles and the soils below the excavated level can be calculated as the product of 0.30 and the effective overburden pressure, σ_{v0}', (i.e., $0.30\sigma_{v0}'$) for level backfill or the product of 0.25 and the dead load as recommended in the 2007 CBC, and should not exceed 500 psf.

LAGGING:

Continuous lagging will be required between the soldier piles. The soldier piles and anchors should be designed for the full anticipated lateral pressure. However, the pressure on the lagging will be less due to arching in the soils. We recommended that the lagging be designed for the recommended earth pressure but limited to a maximum value of 400 psf.

ANCHOR DESIGN:

Tie-back friction anchors may be used to resist lateral loads. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn at 35 degrees with the vertical through the bottom of the excavation. Friction anchors should extend at least 15 feet beyond the potential active wedge and to a greater length if necessary to develop the desired capacities.

The capacities of the anchors should be confirmed by testing of the initial anchors as outlined in the following section. For preliminary design purposes, it may be estimated that drilled friction anchors will develop an average friction value of 500 psf with a minimum overburden of 15 feet over the center of the anchor bond zone. Only the frictional resistance developed beyond the active wedge would be effective in resisting lateral loads. If the anchors are spaced at least 6 feet on center, no reduction in the capacity of the anchors need be considered due to group action.

ANCHOR INSTALLATION:

The anchors may be installed at angles of 15 to 40 degrees below the horizontal. Caving and difficult drilling of the anchor holes should be anticipated and provisions made to minimize the effects of caving.

The anchors should be filled with concrete placed by pumping from the tip out, and the concrete should extend from the tip of the anchor to the active wedge. To reduce the hazard of caving, we suggest that the portion of the anchor shaft within the active wedge be backfilled with sand before testing the anchor. This portion of the shaft should be filled tightly and flush with the face of the excavation. The sand backfill may contain a small amount of cement to allow the sand to be placed by pumping.

ANCHOR TESTING:

The geotechnical engineer should select at least two percent of the initial anchors for a 24-hour 200 percent test and at least an additional five percent of the anchors for quick 200 percent tests. The purpose of the 200 percent tests is to verify the friction value assumed in design. The anchors should be tested to develop twice the assumed friction value. Anchor rods of sufficient strength should be installed in these anchors to support the 200 percent test loading. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.

The total deflection during the 24-hour 200 percent test should not exceed 12 inches. During the 24-hour test, the anchor deflection should not exceed 0.75 inch, measured after the 200 percent test load is applied. If the anchor movement after the 200 percent load has been applied for 12 hours is less than 0.5 inch, and the movement over the previous 4 hours has been less than 0.1 inch, the 24-hour test may be terminated.

For the quick 200 percent tests, the 200 percent test load should be maintained for 30 minutes. The total deflection of the anchor during the 200 percent quick tests should not exceed 12 inches; the deflection after the 200 percent test load has been applied should not exceed 0.25 inch during the 30-minute period.

Where satisfactory tests [illegible] ed on the initial anchors, the anchor diameter and/or length should be increased until satisfa[illegible]lts are obtained.

All production anchors should be pretested to at least 150 percent of the design load; the total deflection during the test should not exceed 12 inches. The rate of creep under the 150 percent test should not exceed 0.1 inch over a 15-minuted period in order for the anchor to be approved for the design loading.

After a satisfactory test, each anchor should be locked-off at the design load. The locked-off load should be verified by rechecking the load in the anchor. If the locked-off load varies by more than 10 percent from the design loads, the load should be reset until the anchor is locked-off within 10 percent of the design load.

The installation of the anchors and the testing of the completed anchors should be observed by our firm.

DEFLECTION:

It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized, however, that some deflection will occur. We estimate that this deflection could be on the order of 1 inch at the top of the shored embankment. If greater deflection occurs during construction, additional bracing may be necessary to reduce movement or settlement of the adjacent structures and utilities. If it is desired to reduce the deflection of the shoring, a greater active pressure could be used in the shoring design.

MONITORING:

Some means of monitoring the performance of the shoring system is recommended. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all soldier piles. In addition, we recommend that monuments be established on the surrounding ground prior to excavation and that they be monitored for horizontal and vertical movement during and following excavation and shoring installation. Also, a survey of existing cracks and offsets in nearby buildings should be performed and recorded and photographic records made.

PRE-JOB CONFERENCE:

operations be performed without the presence of a
n-site pre-job meeting with the owner, the contractor,
occur prior to all grading-related operations. It should be stressed
without the presence of the geotechnical engineer may result in
final compaction report for the project.

CONSTRUCTION OBSERVATION:

All grading operations, including site clearing and stripping, should be observed by a representative of this firm. The presence of our field representative will be for the purpose of providing observation and field testing and will not include any supervising or directing of the actual work of the contractor, his employees, or agents. Neither the presence of our field representative, nor the observations and testing

by our firm shall excuse the contractor in any way for defects discovered in his work. It is understood that our firm will not be responsible for job or site safety on this project, which will be the sole responsibility of the contractor.

LIMITATIONS

C.H.J., Incorporated has striven to perform our services within the limits prescribed by our client, and in a manner consistent with the usual thoroughness and competence of reputable geotechnical engineers and engineering geologists practicing under similar circumstances. No other representation, express or implied, and no warranty or guarantee is included or intended by virtue of the services performed or reports, opinion, documents, or otherwise supplied.

This report reflects the testing conducted on the site as the site existed during the investigation, which is the subject of this report. However, changes in the conditions of a property can occur with the passage of time, due to natural processes or the works of man on this or adjacent properties. Changes in applicable or appropriate standards may also occur whether as a result of legislation, application, or the broadening of knowledge. Therefore, this report is indicative of only those conditions tested at the time of the subject investigation, and the findings of this report may be invalidated fully or partially by changes outside of the control of C.H.J., Incorporated. This report is therefore subject to review and should not be relied upon after a period of one year.

The conclusions and recommendations in this report are based upon observations performed and data collected at separate locations, and interpolation between these locations, carried out for the project and the scope of services described. It is assumed and expected that the conditions between locations observed and/or sampled are similar to those encountered at the individual locations where observation and sampling was performed. However, conditions between these locations may vary significantly. Should conditions be encountered in the field, by the client or any firm performing services for the client or the client's assign, that appear different from those described herein, this firm should be contacted immediately in order that we might evaluate their effect.

If this report or portions thereof are provided to contractors or included in specifications, it should be understood by all parties that they are provided for information only and should be used as such.

The report and its contents resulting from this investigation are not intended or represented to be suitable for reuse on extensions or modifications of the project, or for use on any other project.

CLOSURE

We appreciate this opportunity to be of service and trust this report provides the information desired at this time. Should questions arise, please do not hesitate to contact this firm.

Respectfully submitted,

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AERIAL PHOTOGRAPHS REVIEWED

County of Riverside Flood Control District, July 8, 1948, Black and White Aerial Photograph Nos. 64 and 65.

County of Riverside Flood Control District, January 28, 1962, Black and White Aerial Photograph Nos. 1-197 and -198.

County of Riverside Flood Control District, May 24, 1974, Black and White Aerial Photograph Nos. 84 and 85.

County of Riverside Flood Control District, January 23, 1980, Black and White Aerial Photograph Nos. 1623 and 1624.

County of Riverside Flood Control District, February 23, 1984, Black and White Aerial Photograph Nos. 1623 and 1624.

County of Riverside Flood Control District, January 23, 1990, Black and White Aerial Photograph Nos.3-13 and 3-14.

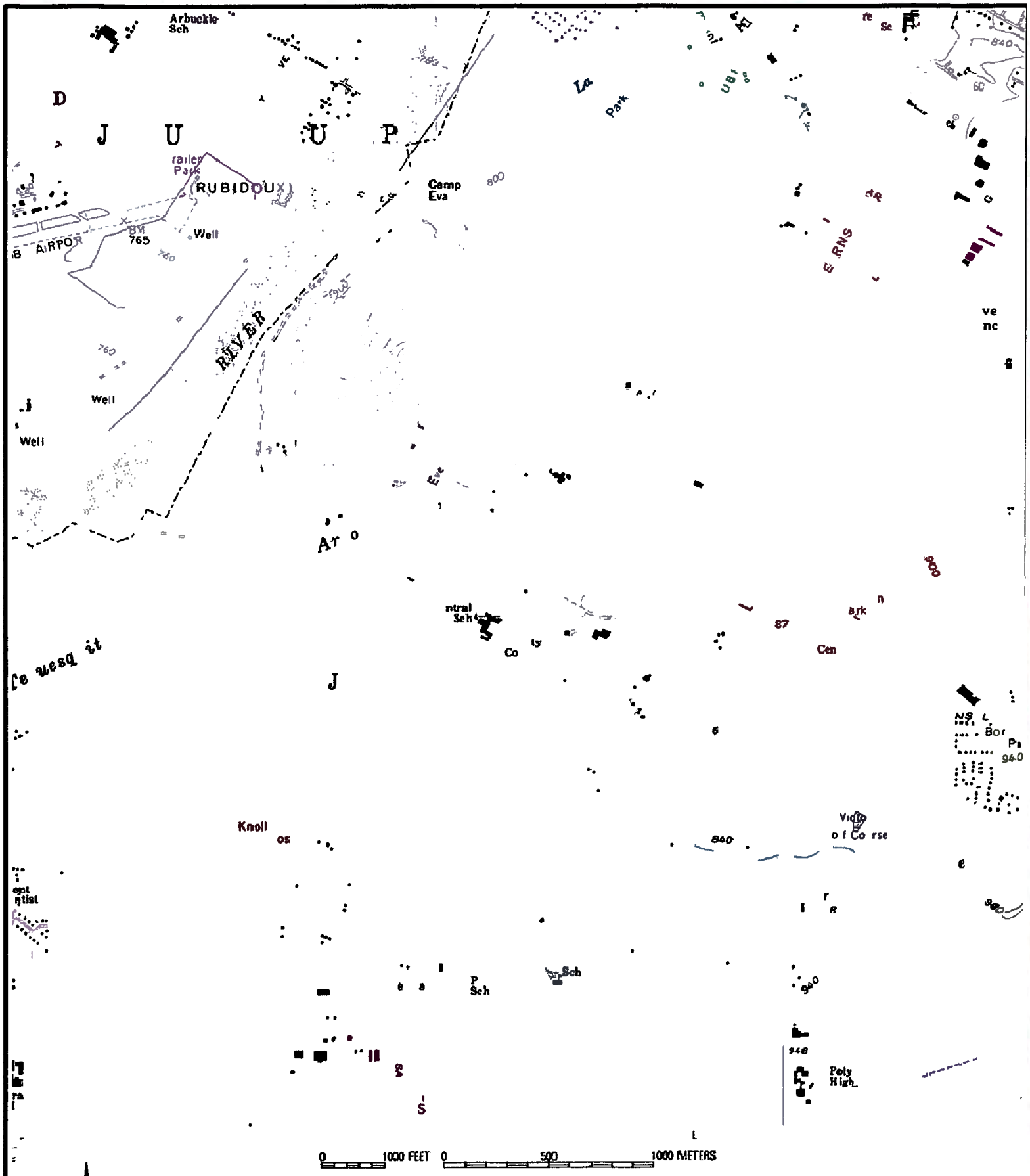
County of Riverside Flood Control District, February 1, 1995, Black and White Aerial Photograph Nos. 3-13 and 3-14.

County of Riverside Flood Control District, March 2, 2000, Back and White Aerial Photograph Nos. 3-14 and 3-15.

County of Riverside Flood Control District, May 11, 2005, Black and White Aerial Photograph Nos. 3-14 and 3-15.

APPENDIX "A"

GEOTECHNICAL MAPS



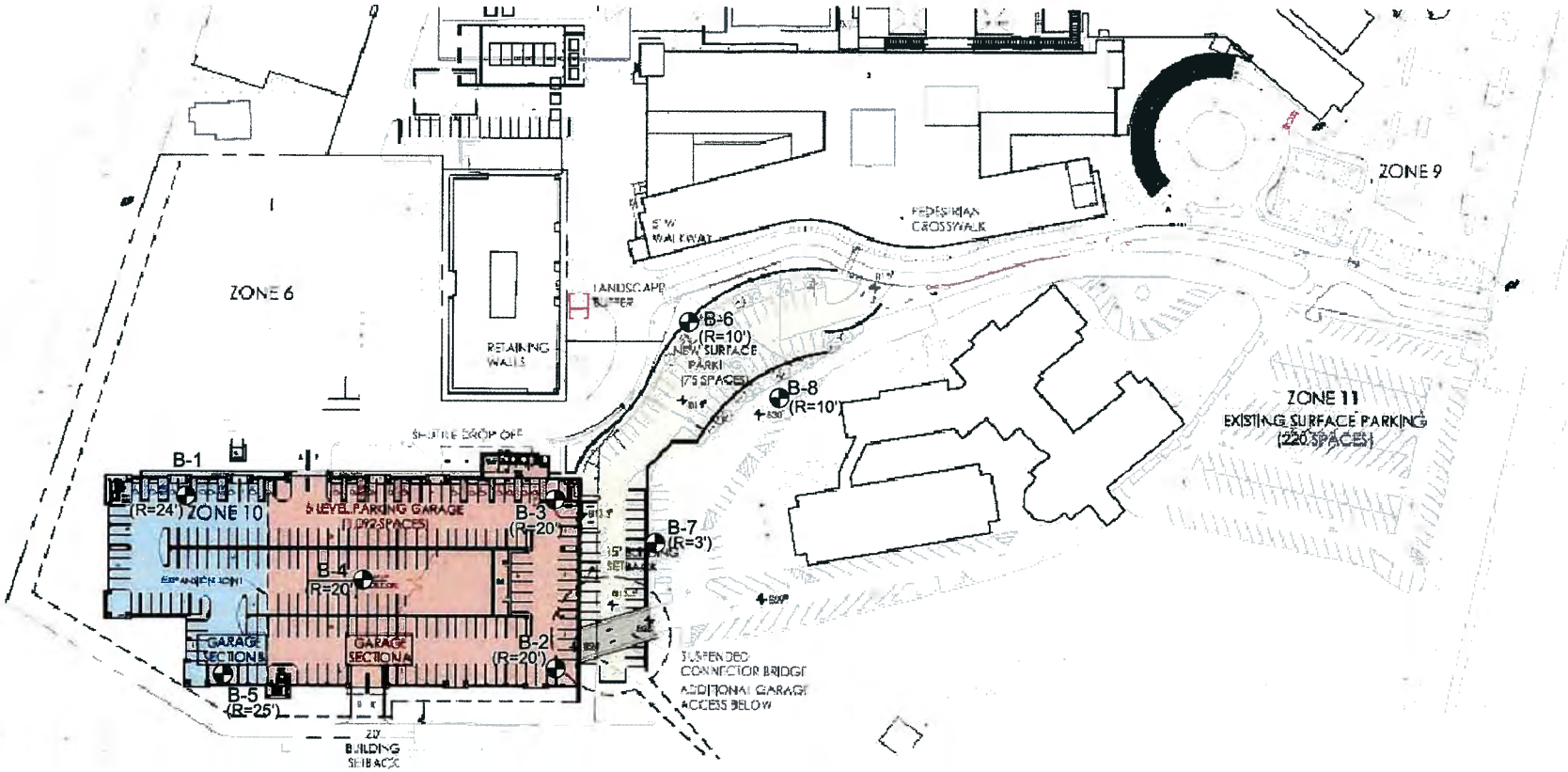
-N-

SCALE: 1" = 2,000'

INDEX MAP

FOR: HCA MANAGEMENT SERVICES, L.P.	GEOTECHNICAL INVESTIGATION PROPOSED 5-STORY PARKING GARAGE RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT 4445 MAGNOLIA AVENUE RIVERSIDE, CALIFORNIA	ENCLOSURE "A-1"
DATE: APRIL 2009		JOB NUMBER 09162-3

C.H.J. Incorporated



-N-

SCALE: 1" = 100'

LEGEND:

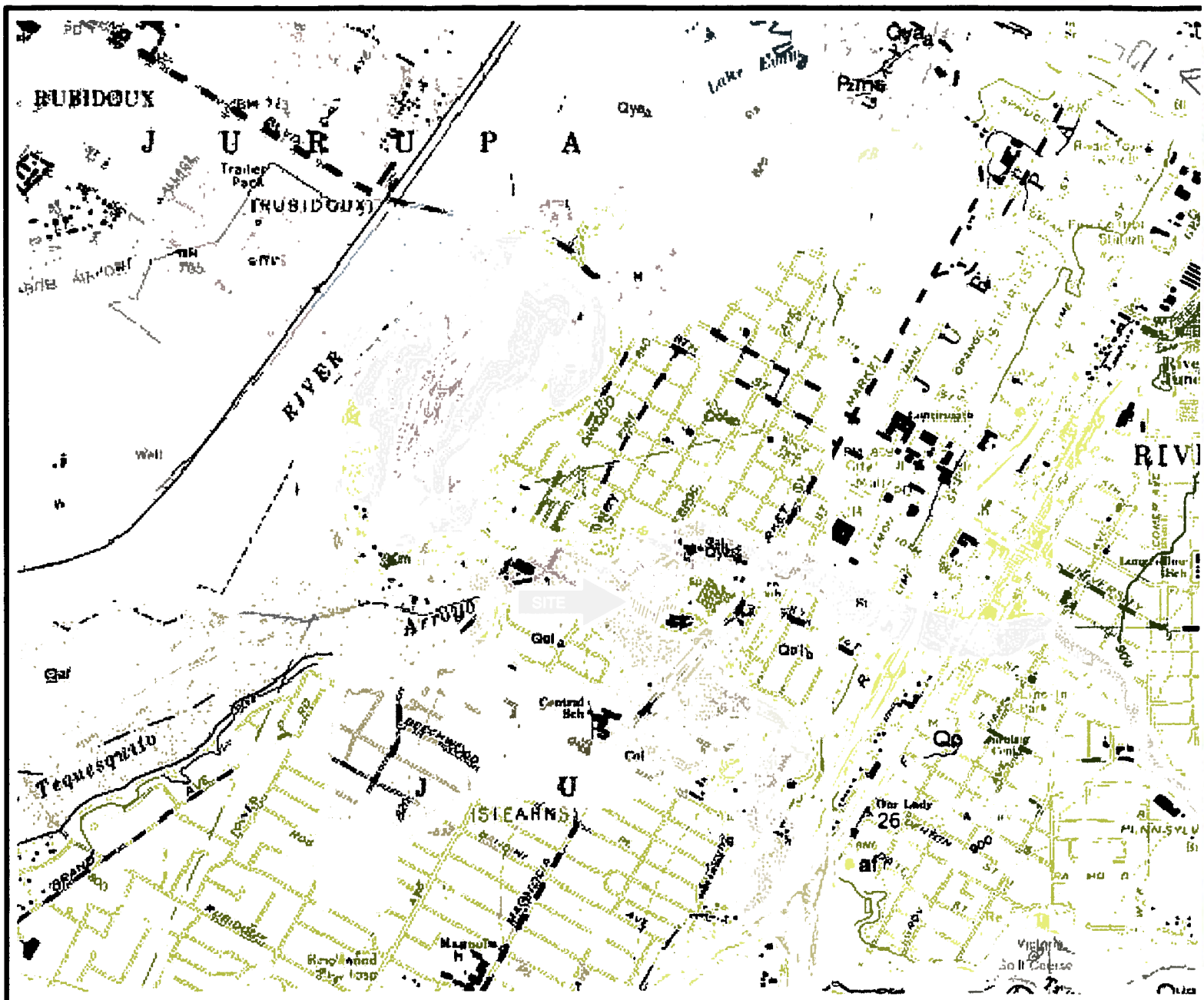
B-8 BORING LOCATIONS

(R=25') APPROXIMATE ANTICIPATED REMOVAL DEPTH IN FEET

SITE PLAN

FOR: HCA MANAGEMENT SERVICES, L.P.	GEOTECHNICAL INVESTIGATION PROPOSED 5-STORY PARKING GARAGE RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT 4445 MAGNOLIA AVENUE RIVERSIDE, CALIFORNIA	ENCLOSURE "A-2"
DATE: APRIL 2009		JOB NUMBER 09162-3

C.H.J. Incorporated



(Base Maps: Morton and Cox, 2001a and 2001b)

GEOLOGIC UNITS:

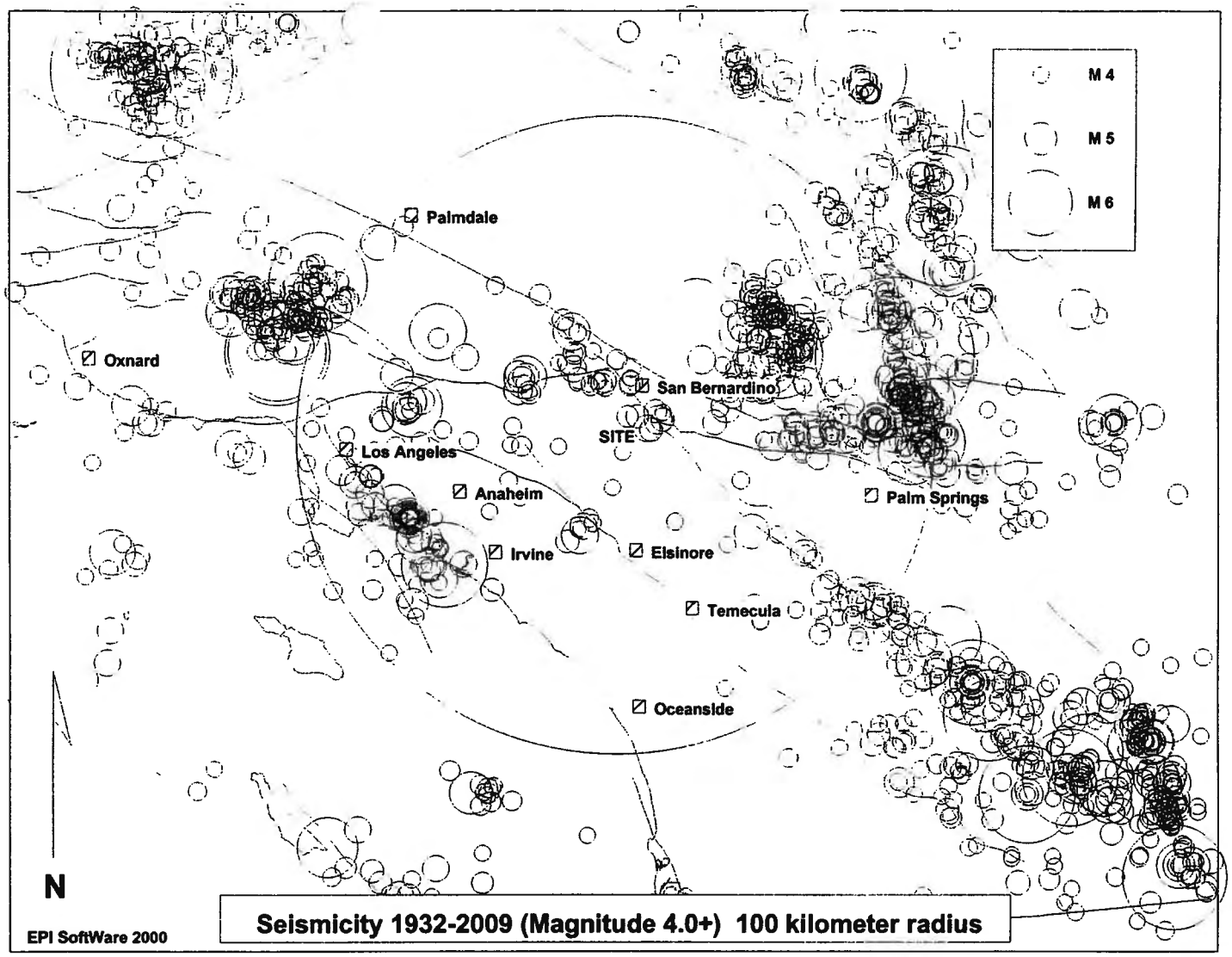
Qaf - Artificial fill (late Holocene)
Qw - Very young wash deposits (late Holocene)
Qya - Young axial channel deposits (Holocene and late Pleistocene)
Qof - Old alluvial fan deposits (late to middle Pleistocene)
Qvof - Very old alluvial fan deposits (early Pleistocene)
Ktd - Tonalite dikes of Mt. Rubidoux (Cretaceous)
Kmrg - Granite of Mt. Rubidoux (Cretaceous)
Krg - Granite of the Riverside area (Cretaceous)

geologic contact

-N-

SCALE: 1" = 2,000'

GEOLOGIC INDEX MAP		
FOR: HCA MANAGEMENT SERVICES, L.P.	GEOTECHNICAL INVESTIGATION PROPOSED 5-STORY PARKING GARAGE RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT 4445 MAGNOLIA AVENUE RIVERSIDE, CALIFORNIA	ENCLOSURE "A-3"
DATE: APRIL 2009		JOB NUMBER 09162-3
		C.H.J. Incorporated



SITE LOCATION: 33.9761 LAT. -117.3844 LONG.

MINIMUM LOCATION QUALITY: C

TOTAL # OF EVENTS ON PLOT: 1501

TOTAL # OF EVENTS WITHIN SEARCH RADIUS 607

MAGNITUDE DISTRIBUTION OF SEARCH RADIUS EVENTS:

4.0- 4.9 : 548
5.0- 5.9 : 54
6.0- 6.9 : 4
7.0- 7.9 : 1
8.0- 8.9 : 0

CLOSEST EVENT: 4.0 ON SUNDAY, OCTOBER 24, 1943 LOCATED APPROX 5 KILOMETERS SOUTH OF THE SITE

LARGEST 5 EVENTS:

7.3 ON SUNDAY, JUNE 28, 1992 LOCATED APPROX. 90 KILOMETERS EAST OF THE SITE
6.4 ON SUNDAY, JUNE 28, 1992 LOCATED APPROX. 57 KILOMETERS NORTHEAST OF THE SITE
6.4 ON SATURDAY, MARCH 11, 1933 LOCATED APPROX 67 KILOMETERS SOUTHWEST OF THE SITE
6.1 ON THURSDAY, APRIL 23, 1992 LOCATED APPROX 98 KILOMETERS EAST OF THE SITE
6.0 ON SATURDAY, DECEMBER 04, 1948 LOCATED APPROX 92 KILOMETERS EAST OF THE SITE

0 50 100
KILOMETERS

EARTHQUAKE EPICENTER MAP		
FOR: HCA MANAGEMENT SERVICES, L.P.	GEOTECHNICAL INVESTIGATION PROPOSED 5-STORY PARKING GARAGE RIVERSIDE COMMUNITY HOSPITAL EXPANSION PROJECT 4445 MAGNOLIA AVENUE RIVERSIDE, CALIFORNIA	ENCLOSURE "A-4"
DATE: APRIL 2009		JOB NUMBER 09162-3

C.H.J. Incorporated

APPENDIX "B"

EXPLORATIONS

KEY TO LOGS

LEGEND OF LAB/FIELD TESTS:

AL	Atterberg limits (ASTM D 4318)
Blows	A measure of the penetration resistance of soil expressed as the number of hammer blows required to advance the indicated sampler 6 inches (or less if noted). Samplers are driven with an automatic hammer that drops a 140-pound weight 30 inches for each blow. After the required seating, samplers are advanced up to 18 inches ahead of the boring, providing up to 3 sets of blows per drive.
Bulk	Indicates Disturbed or Bulk Sample
Consol.	Consolidation Test (ASTM D 2435)
Cor.	Chemical/Corrosivity Tests
Dist.	Indicates Disturbed Sample
DS	Direct Shear Test (ASTM D 3080)
Hydro	Hydrometer analysis (ASTM D 422)
Exp.	Expansion Test (California Building Code Standard Test Method 18-2)
MDC	Maximum Density Optimum Moisture Determination (ASTM D 1557)
N.R.	Indicates No Recovery of Sample
Pass #200	Wash through #200 Screen
PI	Plasticity Index
Ring	Indicates Relatively Undisturbed Ring Sample. Relatively Undisturbed Ring Samples are obtained with a "Modified California Sampler" (3.25" O.D. and 2.42" I.D.) lined with rings driven with a 140-pound weight falling 30 inches.
RV	R-value (Caltrans 301)
SA	Sieve Analysis (ASTM D 422)
SE	Sand Equivalent Test (ASTM D 2419)
SPT	Indicates a sample obtained with an unlined Standard Penetration Test sampler (2" O.D. and 1-3/8" I.D.).

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SITLY SANDS, SAND-SILT MIXTURES
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRANED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE				CH	INORGANIC CLAYS OF HIGH PLASICITY, FAT CLAYS
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

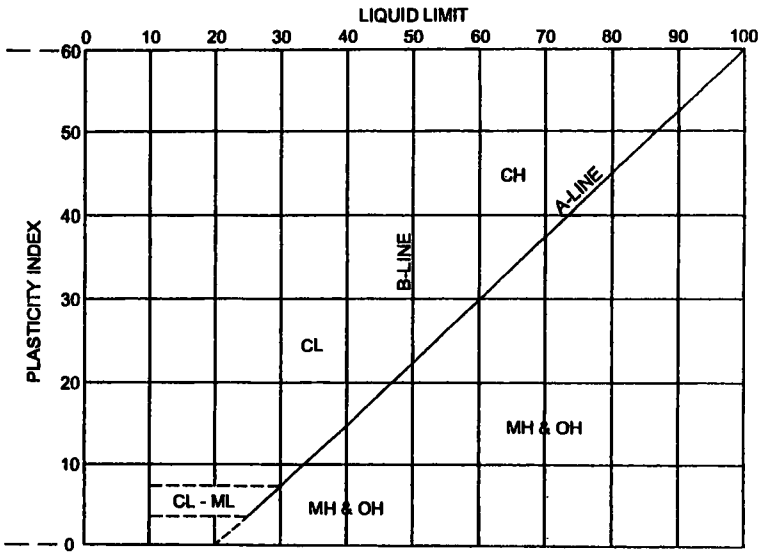
FOR LABROATORY CLASSIFICATION OF FIN-GRAINED SOILS

GRADATION CHART

MATERIAL SIZE	PARTICLE SIZE			
	LOWER LIMIT		UPPER LIMIT	
	MILLIMETERS	SIEVE SIZE	MILLIMETERS	SIEVE SIZE
SAND				
FINE	.074	#200x	0.42	#40 x
MEDIUM	042	#40 x	2.00	#10 x
COARSE	200	#10 x	4.76	# 4 x
GRAVEL				
FINE	4.76	# 4 X	191	3/4"•
COARSE	191	3/4"•	76 2	3"
COBBLES	76.2	3"	304.8	12"
BOULDERS	304.8	12	914.4	36"

x US STANDARD • CLEAR SQUARE OPENINGS

PLASTICITY CHART



UNIFIED SOIL CLASSIFICATION SYSTEM

C.H.J. Incorporated

Enclosure "B"(2of2)
Job No. 09162-3

EXPLORATORY BORING NO. 1

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 28.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		4" Asphalt, No Aggregate Base	Asphalt						
		(SM) Silty Sand, fine to coarse with gravel and clay, brown	Fill		X		10.5		SA
		(SM) Silty Sand, fine with medium, clay, brown	Native		X		11.8		
5				X		6 6 8	11.5	109	Ring, DS
10				X		4 5 6	10.9	98	Ring, Consol.
15				X		4 6 9	8.5	110	Ring
20				X		6 7 10	17.8	113	Ring
		(SP) Sand, fine to coarse with silt, light brown			X		2.0		
25				X		9 14 16	3.3	110	Ring
			Groundwater						
30				X		50/6"	10.7	124	Ring
		(SM) Silty Sand, fine to coarse, silt and gravel to 3",			X		14.3		

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-1a

EXPLORATORY BORING NO. 1

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 28.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		brown		X		50/6"	11.4	132	Ring
		(SM) Silty Sand, fine to coarse, silt and gravel to 3", brown							
40				X		21 50/4"	10.5	120	Ring
		(SM) Silty Sand, fine to coarse, gravel to 2", brown			X		5.3		
45				X		50/4"	13.5	122	Ring
50				X		50/5"	11.4	127	Ring
		(SM) Silty Sand, fine to coarse, silt and gravel to 3", brown			X				
55				X		21 50/5"	10.8	129	Ring
60									
65				X		50/5"			Ring

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-1b

EXPLORATORY BORING NO. 1

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 28.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		(SM) Silty Sand, fine to coarse, silt and gravel to 3", brown		X		50/6"	18.2	120	Ring
75				X		50/5"	21.0	112	Ring
		(SM) Silty Sand, fine to medium with clay, gray			X				
80				X		21 50/4"	19.1	110	Ring, DS
		(SM) Silty Sand, fine to coarse with clay, gravel to 2", brown			X		13.0		
85				X		50/3"	16.1	119	Ring
90				X		50/3"	10.9	130	Ring
		END OF BORING REFUSAL AT 90.5', NO BEDROCK FILL TO 4.0', SLIGHT CAVING GROUNDWATER AT 28.0'	Refusal						
95									
100									

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-1c

EXPLORATORY BORING NO. 2

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 27.0

DEPTH (ft)	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
	4" Asphalt, No Aggregate Base	Asphalt						
	(SM) Silty Sand, fine to coarse with gravel and clay, gray brown	Fill		X		12.4		SA
	(ML) Sandy Silt, fine with clay, dark brown	Native		X		5.3		MDC, E.I.
5			X		4 4 6	65	109	Ring, Consol.
10			X		4 6 6	8.7	115	Ring
15			X		7 10 12	5.6	124	Ring
	(SM) Silty Sand, fine to medium with coarse, silt and gravel to 2", red brown			X		6.2		
20			X		31 50/4"	5.6	116	Ring
25				X		16.3		
	(SM) Sand, fine to coarse, silt and gravel to 2", brown	Groundwater	X		13 18 25	15.3	114	Ring
30			X		50/5"	15.7	117	Ring

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-2a

EXPLORATORY BORING NO. 2

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 27.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		(SM) Sand, fine to coarse, silt and gravel to 2", brown							
		END OF BORING	Refusal						
		REFUSAL AT 36.0', NO BEDROCK FILL TO 4.0', SLIGHT CAVING GROUNDWATER AT 27.0'							
40									
45									
50									
55									
60									
65									

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

EXPLORATORY BORING NO. 3

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): N/A

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		3.5" Asphalt, No Aggregate Base	Asphalt						
		(SM) Silty Sand, fine to coarse with gravel and clay, gray brown	Fill				11.5		SA
		(SM) Silty Sand, fine with medium, clay, gray brown	Native				10.2		
5				X		2 3 2			SPT
10				X		1 2 2			SPT
15				X		1 2 1			SPT
		(SM) Silty Sand, fine to coarse, silt and gravel to 3", gray brown		X		14 26 26			SPT
20		END OF BORING	Refusal						
		REFUSAL AT 21.5', NO BEDROCK FILL TO 4.0', SLIGHT CAVING NO FREE GROUNDWATER							
25									
30									

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-3

EXPLORATORY BORING NO. 4

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 29.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		4" Asphalt, No Aggregate Base	Asphalt						
		(SM) Silty Sand, fine, clay, brown	Fill				8.7		SA
5		(ML) Sandy Silt, fine with clay, brown	Native				20.6		SA
				X		2 1 2	20.6		SPT, Pass #200
10		(SM) Silty Sand, fine with clay, brown							
				X		2 1 3			SPT, Pass #200
15									
				X		2 3 4			SPT, Pass #200
20		(SM) Silty Sand, fine to coarse with silt and gravel to 3", brown							
				X		2 26 43			SPT, Pass #200
25									
				X		14 50/5"			SPT, Pass #200
			Groundwater						
30				X		50/5"			SPT

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-4a

EXPLORATORY BORING NO. 4

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 29.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		(SM) Silty Sand, fine to coarse, silt and gravel to 3", brown							
				X		50/5"			SPT
40									
						50			SPT
		END OF BORING	Refusal						
45		REFUSAL AT 43.0', NO BEDROCK FILL TO 5.0', SLIGHT CAVING GROUNDWATER AT 29.0'							
50									
55									
60									
65									

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

EXPLORATORY BORING NO. 5

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 28.0

DEPTH (ft)	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
	3" Asphalt, No Aggregate Base	Asphalt						
	(SM) Silty Sand, fine with medium, clay, brown	Fill				9.8		
5			X		4 4 4			SPT
	(ML) Sandy Silt, fine with clay, dark brown	Native				15.1		
10			X		2 3 2			SPT
15			X		2 3 3			SPT
	(SM) Silty Sand, fine to coarse, brown							
20			X		3 4 4			SPT
	(SM) Silty Sand, fine to coarse with silt, brown							
25			X		3 5 8			SPT
		Groundwater						
30			X		4 13 30			SPT

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-5a

EXPLORATORY BORING NO. 5

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 790 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): 28.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		(SM) Silty Sand, fine to coarse with silt, brown		X		19 50			SPT
		END OF BORING	Refusal						
		REFUSAL AT 36.0', NO BEDROCK FILL TO 6.0', SLIGHT CAVING GROUNDWATER AT 28.0'							
40									
45									
50									
55									
60									
65									

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

EXPLORATORY BORING NO. 6

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 800 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): N/A

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		(SM) Silty Sand, fine with medium, clay, brown	Fill		X		9.5		
5		(SM) Silty Sand, fine to medium, gravel to 1", brown	Native		X		9.3		
				X		3 6 6	10.4	120	Ring
10		(SM) Silty Sand, fine to coarse, silt and gravel to 2", brown			X		2.2		
				X		6 8 10	3.4	112	Ring
15				X		16 20 42	5.0	109	Ring
20				X		32 50/5"	4.6	111	Ring
25				X		50/5"	5.2	125	Ring
30		END OF BORING REFUSAL AT 30.0', NO BEDROCK FILL TO 5.0', SLIGHT CAVING NO FREE GROUNDWATER	Refusal						

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-6

EXPLORATORY BORING NO. 7

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 825 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): N/A

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		3" Asphalt	Asphalt				11.5		
		(SM) Silty Sand, fine to medium, clay, brown	Native						
5				X		17 33 50	11.5	123	Ring
		(SM) Silty Sand, fine, clay, brown					11.5		
10				X		9 17 20	15.3	116	Ring
15				X		9 14 21	6.5	108	Ring
		(SM) Silty Sand, fine with medium, clay, red brown					11.1		
20				X		15 25 45	7.7	132	Ring
25				X		21 29 41	9.2	132	Ring
		END OF BORING							
		NO REFUSAL, NO BEDROCK NO FILL, SLIGHT CAVING NO FREE GROUNDWATER							
30									

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-7

EXPLORATORY BORING NO. 8

Date Drilled: 4/2/09 | Client: HCA Management Services, LP

Equipment: CME 75 Track Rig | Driving Weight / Drop: 140 lbs./30 in.

Surface Elevation(ft): 825 +/- 2.5 | Logged by: VJR | Measured Depth to Water(ft): N/A

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		3" Asphalt, No Aggregate Base	Asphalt						
		(ML) Silt with sand, fine, clay, brown	Native				14.1		
5		(SM) Silty Sand, fine, clay, brown					12.9		
				X		8 7 5	12.5	100	Ring
10				X		24 37 50/5"	8.3	128	Ring
15		(SM) Silty Sand, fine to medium, red brown					9.9		
				X		23 34 50/4"	11.9	121	Ring
20				X		33 50/2"	7.9	128	Ring
25				X		22 50/4"	10.3	126	Ring
		END OF BORING							
30		NO REFUSAL, NO BEDROCK NO FILL, SLIGHT CAVING NO FREE GROUNDWATER							

BORING LOG - NO EQUIV & BLOW PER 6 IN 09162-3.GPJ CHJ.GDT 5/11/09

C.H.J.

5-STORY PARKING GARAGE, RIVERSIDE COMM HOSP EXP
RIVERSIDE, CALIFORNIA

Job No. 09162-3

Enclosure B-8

APPENDIX "C"

LABORATORY TESTING

Enclosure "C-1"
Job No. 09162-3

TEST DATA SUMMARY

EXPANSION INDEX:

(ASTM D 4829)

Boring No.	Depth of Sample (ft.)	Initial Moisture (%)	Final Moisture (%)	Degree of Saturation (%)	Expansion Index	Expansion Potential
2	4.0	8.4	41.1	48	27	"low"

OPTIMUM MOISTURE - MAXIMUM DENSITY RELATION:

(ASTM D 1557)

Boring No.	Depth of Sample (ft.)	Classification	Optimum Moisture (Percent)	Maximum Dry Density (pcf)
2	4.0	Silty Sand, fine with clay dark brown (ML)	11.4	125.0

DIRECT SHEAR TESTS - Undisturbed: (Saturated)

(ASTM D 3080)

Boring No.	Depth of Sample (ft.)	Angle of Internal Friction (^{0})	Apparent Cohesion (psf)
1	5.0	31	48
1	25.0	41	0
1	80.0	37	18

Enclosure "C-1"
Job No. 09162-3

TEST DATA SUMMARY

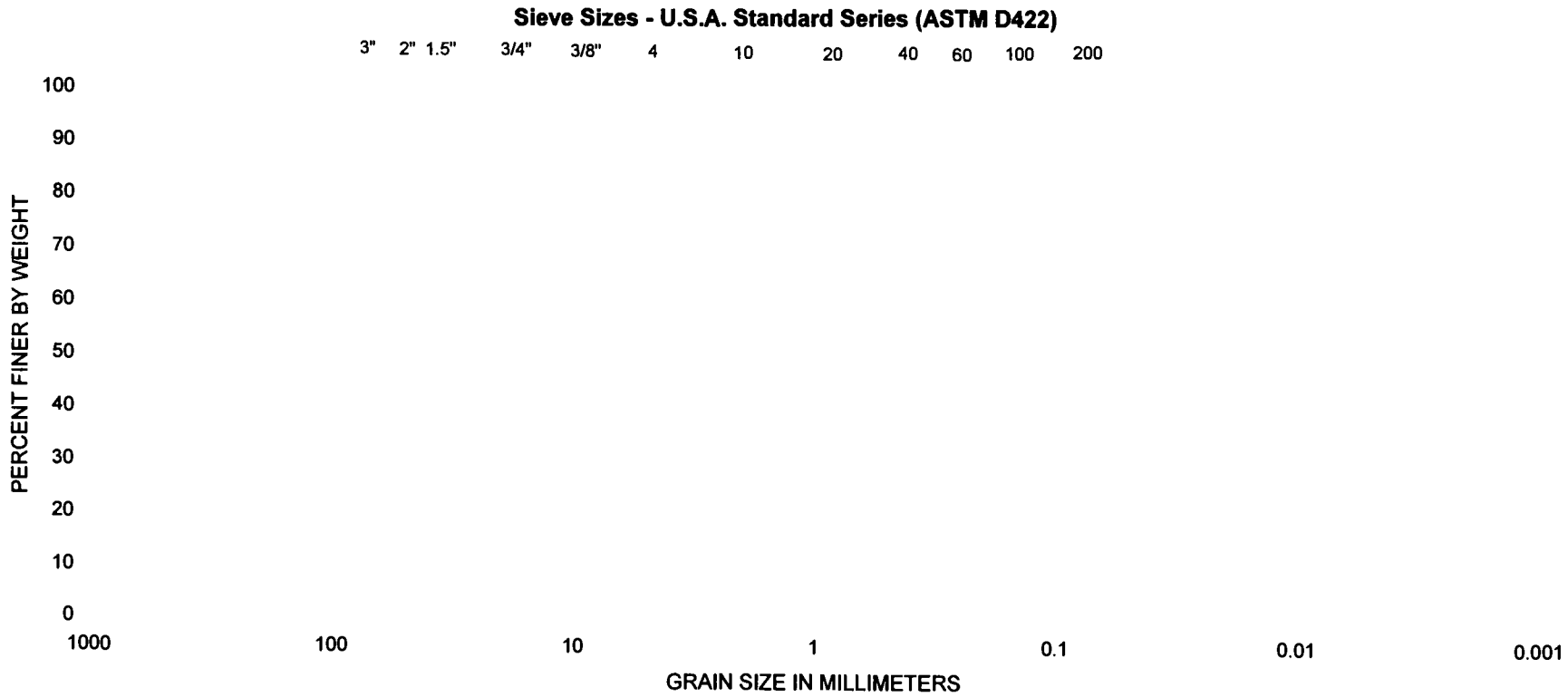
R-VALUE:

(Caltrans 301)

Sample No.	Depth of Sample (ft.)	Sand Equivalent (Caltrans 217)	R-value (By Exudation)
1A to 5A	0.5 to 1.0	15	12

FINES CONTENT:

Boring No.	Depth of Sample (ft.)	Classification	Fine Content (%)
4	5.0 - 11.0	Sandy Silt, fine with clay, brown (ML)	73.6
4	11.0 - 20.0	Silty Sand, fine with clay, brown (SM)	48.3
4	20.0 - 48.0	Silty Sand, fine to coarse with silt and gravel to 3", brown (SM)	12.7
5	6.0 - 24.0	Silty Sand, fine with clay, dark brown (SM)	91.1



Cobbles & Boulders	Gravel		Sand			Silt	Clay
	Coarse	Fine	Coarse	Medium	Fine		

Symbol	Sample No	Depth (ft)	Classification	D_{10} (mm)	D_{30} (mm)	D_{50} (mm)	D_{60} (mm)	C_u	C_c	SE
	1A to 5A	0.5	(SM) Silty sand, fine to coarse with clay and gravel			0.167	0.349			15
	4B	5	(SM) Sandy silt, fine with clay, brown							

C.H.J. Incorporated

GRAIN SIZE DISTRIBUTION

Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location:	4445 Magnolia Avenue, Riverside, California		
Job Number:	09162-3	Enclosure:	C-2

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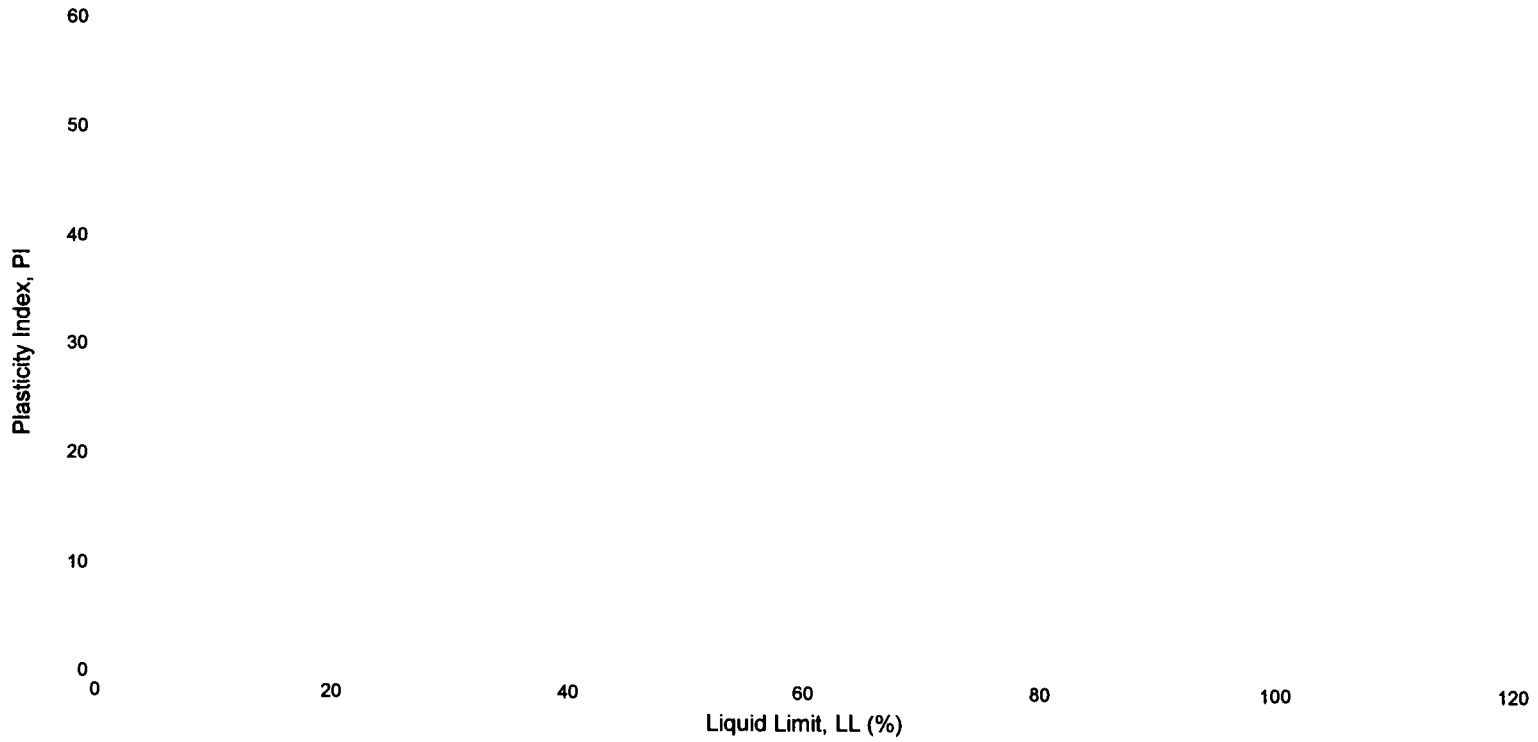

Symbol	Boring No.	Depth (ft)	Classification	PL (%)	LL (%)	PI (%)
	2	4	(ML) Sandy silt, fine with clay, dark brown	20.0	25.0	5.0

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Plasticity Chart (ASTM D 2487)			
Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location:	4445 Magnolia Avenue, Riverside, California		
Job Number:	09162-3	Enclosure:	C-3

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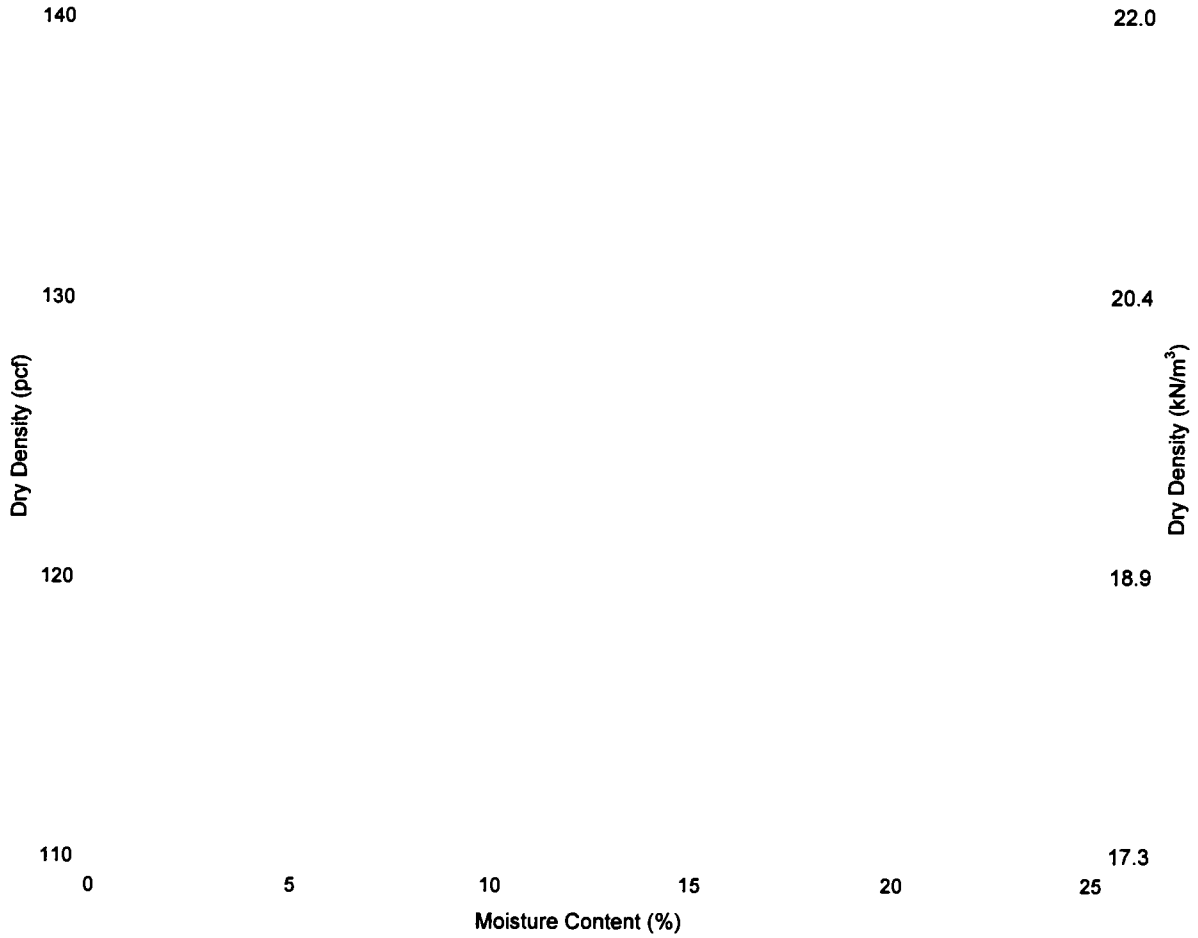
Optimum oisture - Maximum Density Determination Test (ASTM D 1557)



Boring No.		Depth (ft)	Soil/Sample Type	γ_{max} (pcf)	w_{opt} (%)
	2	4	(ML) Sandy silt, fine with clay, dark brown	125.0	11.4

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MOISTURE-DENSITY RELATIONSHIP

Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location:	4445 Magnolia Avenue, Riverside, California		
Job No.:	09162-3	Enclosure:	C-4

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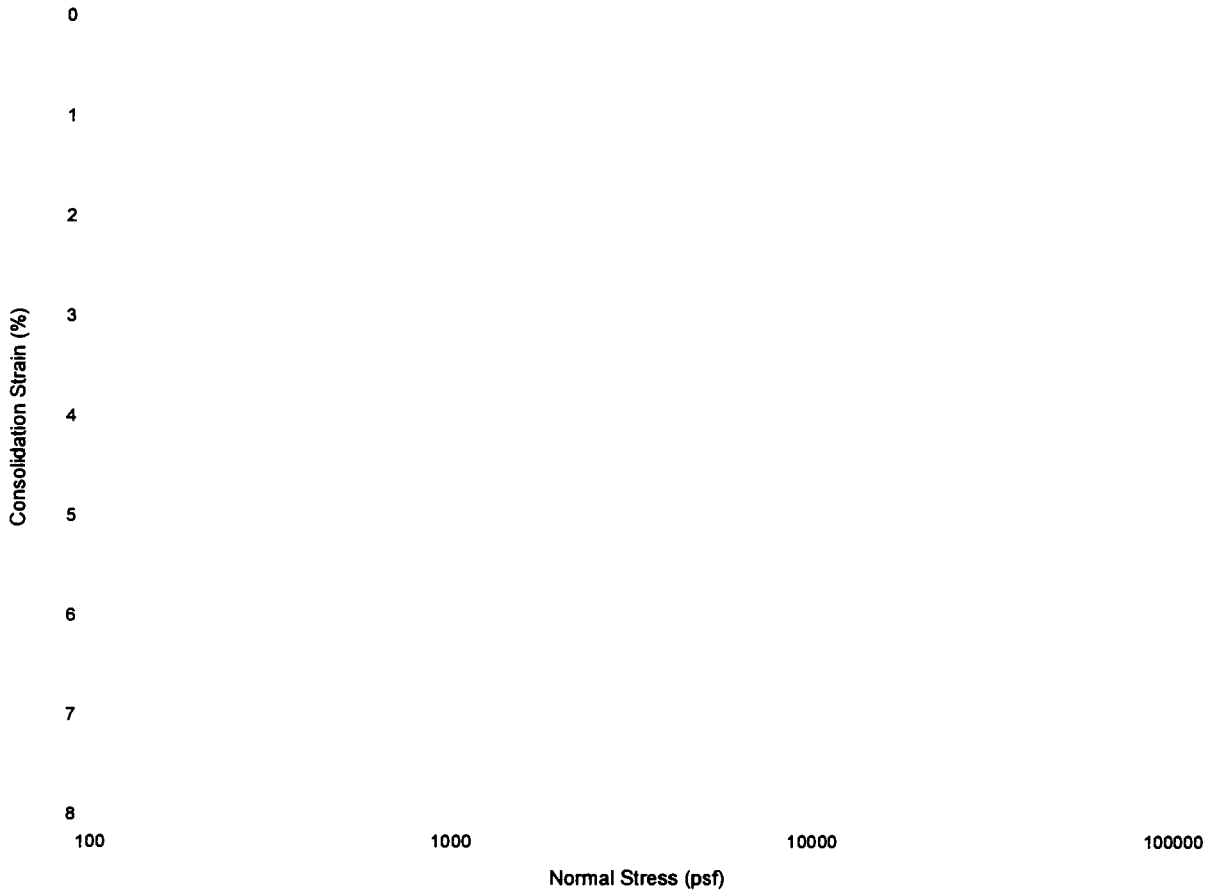
Consolidation Test (ASTM D 2435)



Boring #		Depth (ft)	Soil/Sample Type	γ_d (pcf)	MC(%)	HCS(%)
	1-3	10	(SM) Silty sand, fine with medium and clay, brown	93.2	9.9	1.8
	2-2	7	(ML) Sandy silt, fine with clay, dark brown	109.3	6.4	0.2

* HCS - Hydroconsolidation strain in percent.

C.H.J. Incorporated

CONSOLIDATION TEST			
Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location:	4445 Magnolia Avenue, Riverside, California		
Job No.:	09162-3	Enclosure:	C-5

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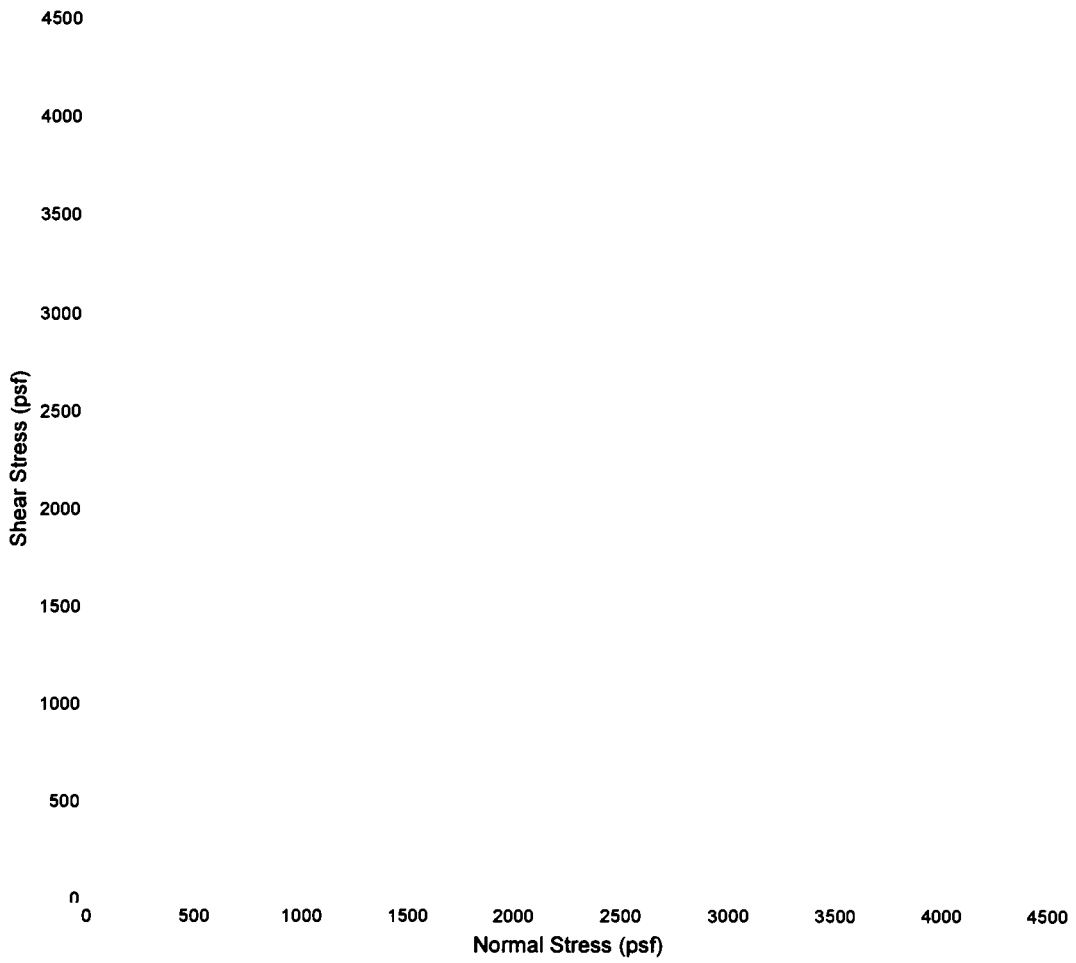

Boring No.		Depth (ft)	Soil/Sample Type	γ_d (pcf)	MC(%)	C (psf)	φ(°)
	1	5	(SM) Silty sand, fine with medium and clay / undisturbed	109	11.5	48	31
	1	25	(SP) Sand, fine to coarse with silt / undisturbed	110	3.3	0	41
	1	80	(SM) Silty sand, fine to medium with clay / undisturbed	110	19.1	18	37

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DIRECT SHEAR TEST			
Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location:	4445 Magnolia Avenue, Riverside, California		
Job No.:	09162-3	Enclosure:	C-6

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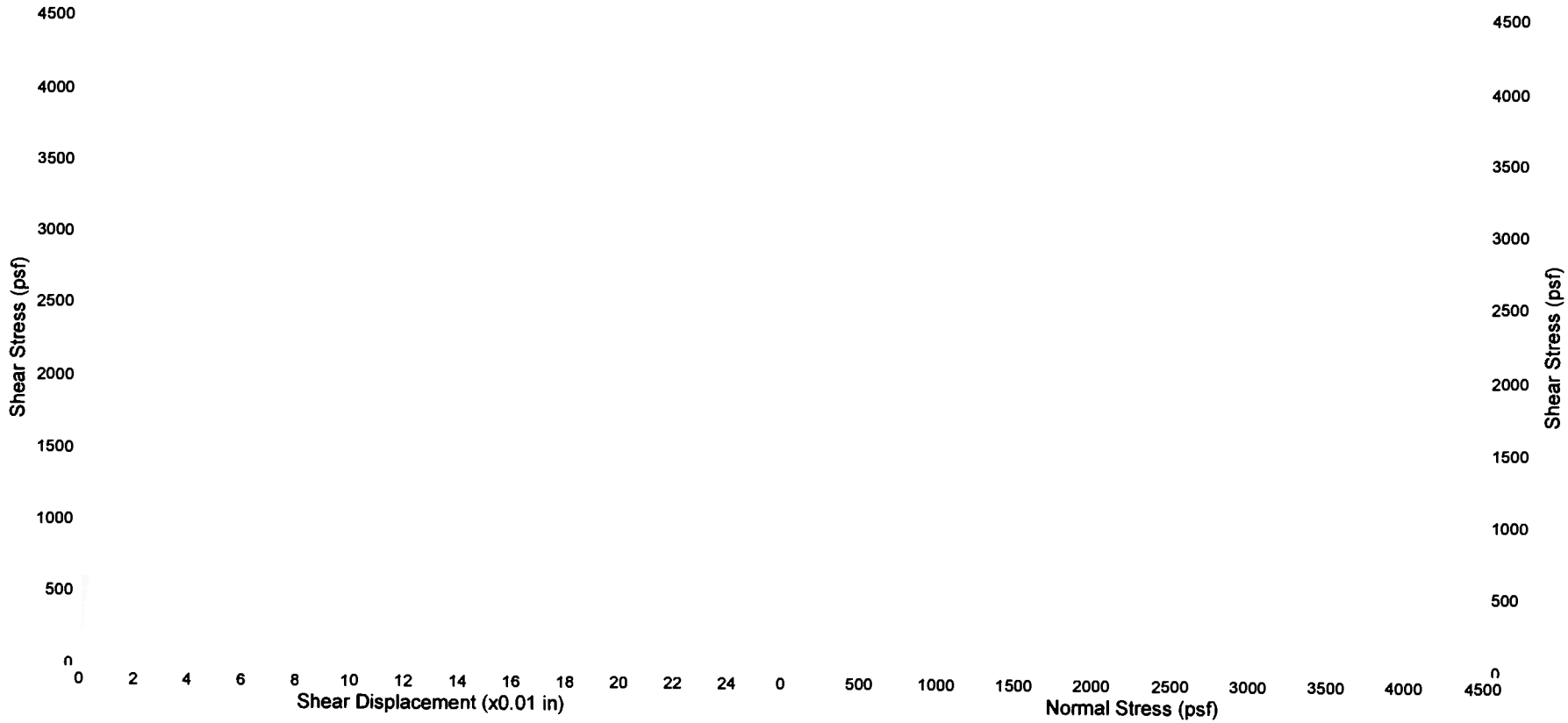

Boring No.	Depth (ft)	Soil/Sample Type	γ_d (pcf)	MC (%)	C_{peak} (psf)	φ_{peak} (°)	C_{res} (psf)	φ_{res} (°)
1	5	(SM) Silty sand, fine with medium and clay / undisturbed	109.0	11.5	192	30	48	31

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DIRECT SHEAR TEST

Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location	4445 Magnolia Avenue, Riverside, California		
Job Number	09162-3	Enclosure	C-7

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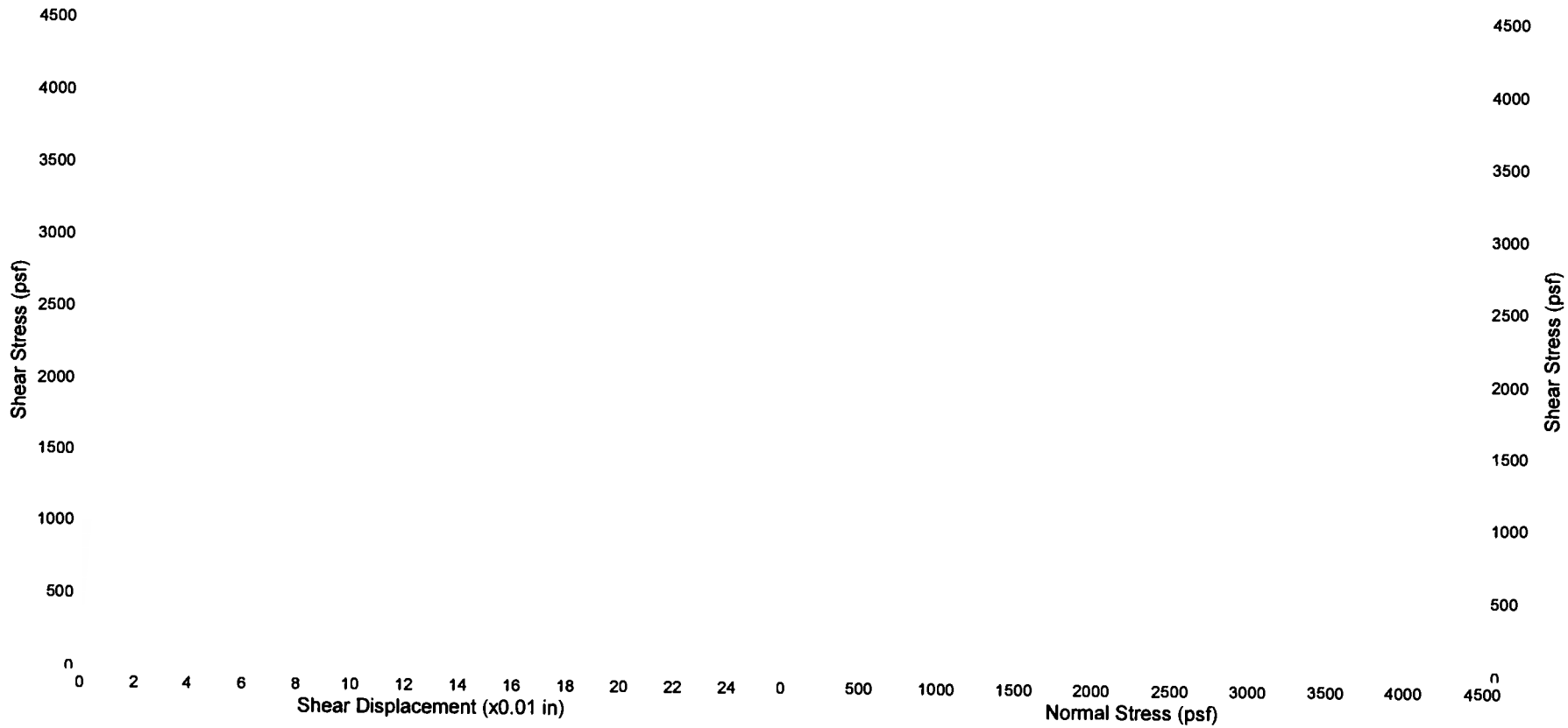

Boring No.	Depth (ft)	Soil/Sample Type	γ_d (pcf)	MC (%)	C_{peak} (psf)	φ_{peak} (°)	C_{res} (psf)	φ_{res} (°)
1	25	(SP) Sand, fine to coarse with silt / undisturbed	110.0	3.3	216	43	0	41

C.H.J. Incorporated

DIRECT SHEAR TEST

Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location	4445 Magnolia Avenue, Riverside, California		
Job Number	09162-3	Enclosure	C-8

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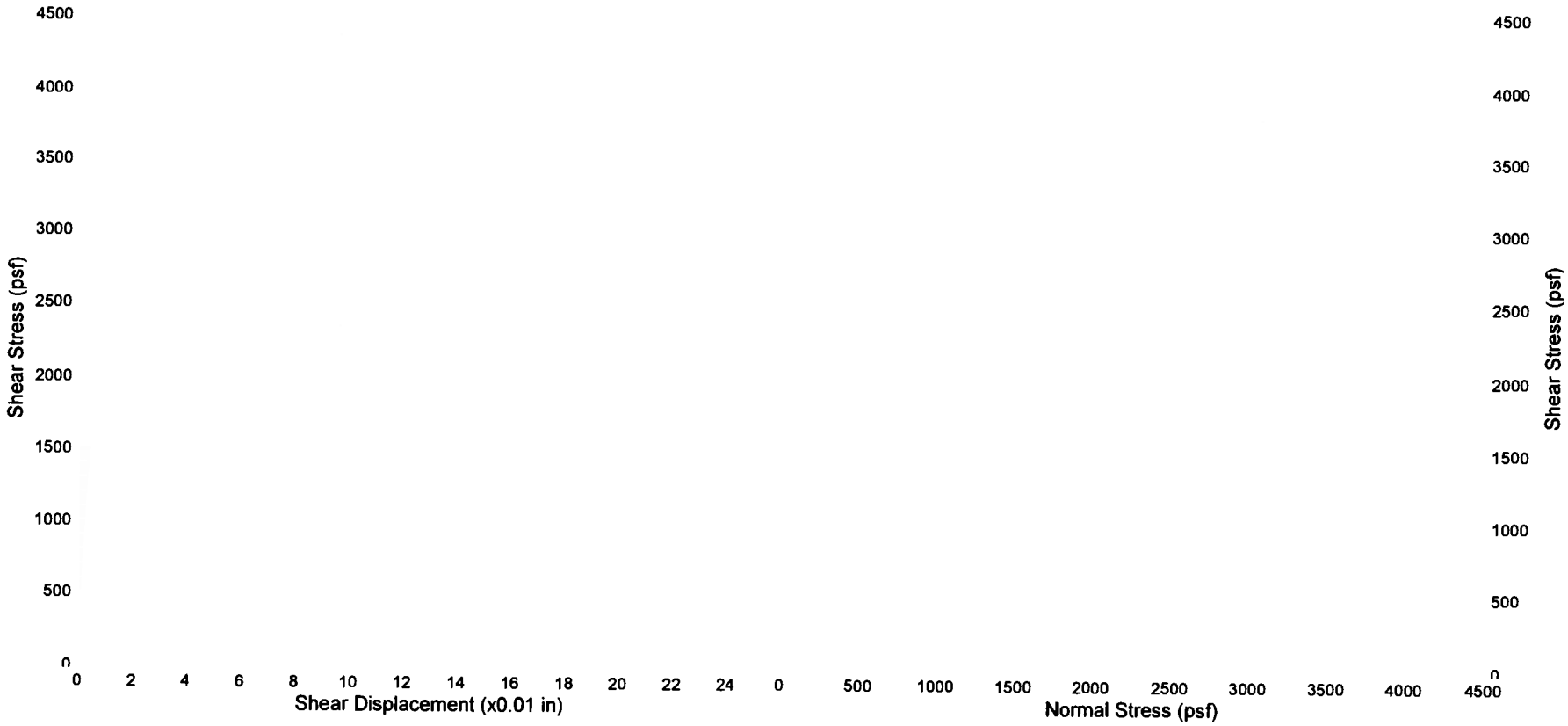

Boring No.	Depth (ft)	Soil/Sample Type	γ_d (pcf)	MC (%)	C_{peak} (psf)	φ_{peak} (°)	C_{res} (psf)	φ_{res} (°)
1	80	(SM) Silty sand, fine to medium with clay / undisturbed	110.0	19.1	876	35	18	37

C.H.J. Incorporated

DIRECT SHEAR TEST

Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location	4445 Magnolia Avenue, Riverside, California		
Job Number	09162-3	Enclosure	C-9

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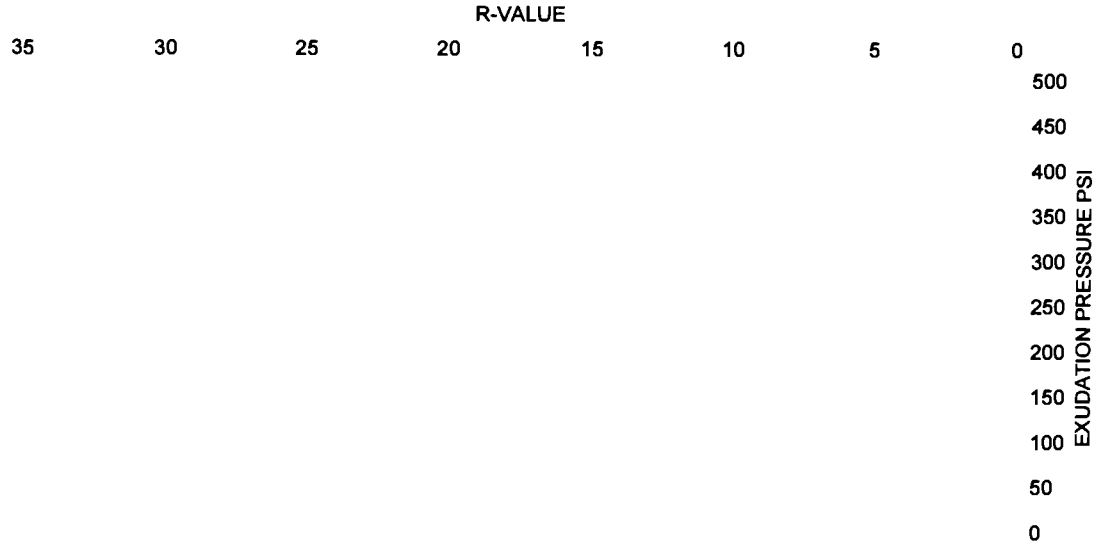
Traffic Index (T.I.) 5.0	A	B	C	D
COMPACTOR AIR PRESSURE P.S.I	75	100	125	
INITIAL MOISTURE %	10 5	10.5	10.5	
WATER ADDED, ML	27	13	5	
WATER ADDED %	2.6	1 2	0 5	
MOISTURE AT COMPACTION %	13.1	11 7	11 0	
HEIGHT OF BRIQUETTE	2.50	2.52	2 52	
WET WEIGHT OF BRIQUETTE	1150	1150	1150	
DENSITY LB. PER CU FT.	123.2	123 7	124 6	
STABILOMETER PH AT 1000 LBS.	76	58	42	
2000 LBS.	155	125	102	
DISPLACEMENT	4.70	4.50	4 30	
R-VALUE	2	13	25	
EXUDATION PRESSURE	230	310	430	
THICK. INDICATED BY STAB	1 57	1 38	1 20	
EXPANSION PRESSURE	4	8	13	
THICK. INDICATED BY E P	0 13	0 27	0 43	

EXUDATION CHART



R-Value: 12

Sample No.	Depth (ft)	Soil/Sample Type	SE	w_o(%)
1A to 5A	0.5	(SM) Silty sand, fine to coarse with clay and gravel	15	10.5

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R-VALUE TEST			
Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location:	4445 Magnolia Avenue, Riverside, California		
Job No.:	09162-3	Enclosure:	C-10

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ASPHALT CONCRETE STRUCTURAL SECTION DESIGN

R-Value used	

Traffic Index (T.I.)	Recommended Street Sections	
4.00	0.25' AC / 0.40' AB Class 2	0.45' AC / Native
4.50	0.25' AC / 0.55' AB Class 2	0.55' AC / Native
5.00	0.25' AC / 0.70' AB Class 2	0.60' AC / Native
5.50	0.25' AC / 0.85' AB Class 2	0.65' AC / Native
6.00	0.25' AC / 1.00' AB Class 2	0.75' AC / Native
6.50	0.30' AC / 1.10' AB Class 2	0.80' AC / Native
7.00	0.30' AC / 1.20' AB Class 2	0.85' AC / Native
7.50	0.30' AC / 1.30' AB Class 2	0.95' AC / Native
8.00	0.35' AC / 1.35' AB Class 2	1.00' AC / Native
8.50	0.35' AC / 1.45' AB Class 2	1.05' AC / Native
9.00	0.35' AC / 1.55' AB Class 2	1.15' AC / Native
9.50	0.40' AC / 1.65' AB Class 2	1.20' AC / Native
10.00	0.40' AC / 1.75' AB Class 2	1.25' AC / Native
10.50	0.45' AC / 1.85' AB Class 2	1.35' AC / Native
11.00	0.45' AC / 1.95' AB Class 2	1.40' AC / Native
11.50	0.45' AC / 2.05' AB Class 2	1.45' AC / Native
12.00	0.50' AC / 2.15' AB Class 2	1.55' AC / Native
12.50	0.50' AC / 2.25' AB Class 2	1.60' AC / Native
13.00	0.50' AC / 2.35' AB Class 2	1.65' AC / Native

NOTE: MIN. A.C. THICKNESS IS 0.25' MIN. A.B. THICKNESS IS 0.35'
All thicknesses arerounded to the nearest 0.05 foot.
The above values may not reflect applicable county or city minimum standards.
A safety factor of 0.20 for the G.E. of the A.C. is included as per Caltrans.
The values also include a safety factor of 0.10 for A.C./ native soil.
Some agencies do not permit placing A.C. over native soil.

PARKING LOT PCC SECTION DESIGN

R-Value	Concrete Compressive Strength, f_c (psi)	Flexural Strength, M_r (psi)
	3500	530
Traffic Category	**ADTT**	**PCC Section (in)**
A	0	4
A-1	1	5
A-1	10	6.5
B	25	6.5
B	300	7
C	100	7
C	300	7.5
C	700	7.5
D	700	8.5

C.H.J. Incorporated

AC & PCC STRUCTURAL SECTION DESIGN			
Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location:	4445 Magnolia Avenue, Riverside, California		
Job No.:	09162-3	Enclosure:	C-11

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Table 1 - Laboratory Tests on Soil Samples

C.H.J. Inc.
RCH Parking Structure
Your #09162-3, SA #09-0291LAB
14-Apr-09

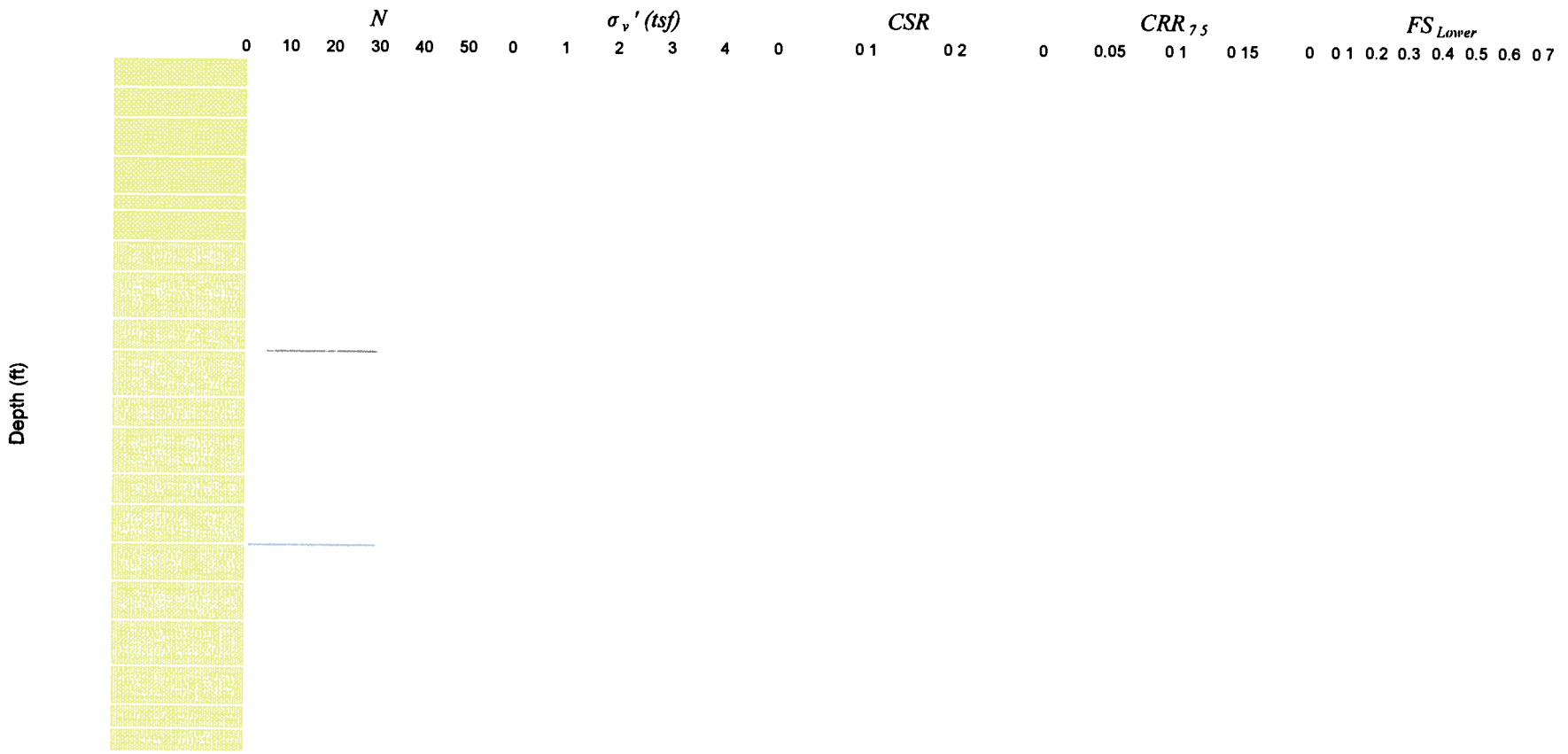
Sample ID			1-A to 5-A
Resistivity		**Units**	
as-received		ohm-cm	18,000
saturated		ohm-cm	3,200
pH			7.9
Electrical Conductivity		mS/cm	0.14
Chemical Analyses			
Cations			
calcium	Ca^{2+}	mg/kg	90
magnesium	Mg^{2-}	mg/kg	19
sodium	Na^{1+}	mg/kg	46
potassium	K^{1+}	mg/kg	17
Anions			
carbonate	CO_3^{2-}	mg/kg	ND
bicarbonate	HCO_3^{1-}	mg/kg	247
flouride	F^{1-}	mg/kg	5.6
chloride	Cl^{1-}	mg/kg	5.1
sulfate	SO_4^{2-}	mg/kg	57
phosphate	PO_4^{3-}	mg/kg	6.3
Other Tests			
ammonium	NH_4^{1+}	mg/kg	1.2
nitrate	NO_3^{1-}	mg/kg	19
sulfide	S^{2-}	qual	na
Redox		mV	na

Electrical conductivity in millisiemens/cm and chemical analysis were made on a 1:5 soil-to-water extract.
mg/kg = milligrams per kilogram (parts per million) of dry soil.
Redox = oxidation-reduction potential in millivolts
ND = not detected
na = not analyzed

431 West Baseline Road · Claremont, CA 91711
Phone: 909.626.0967 · Fax: 909.626.3316

APPENDIX "D"

GEOTECHNICAL CALCULATIONS



CL, CL-ML
SC, SC-SM
ML
ML-SM
SM-ML
SM
SW-SC, SP-SC
SW-SM SP-SM
SW SP
GC, GC-GM
GM
GW-GC, GP-GC
GW-GM, GP-GM
GW, GP

Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 2.07 in
Settlement at 3.0 ft = 2.06 in

C.H.J. Incorporated

Liquefaction Analysis

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-1	Enclosure:	D-1

CHJ® GeoSuite ver2 31 Programmed by Fred Yi PhD PE

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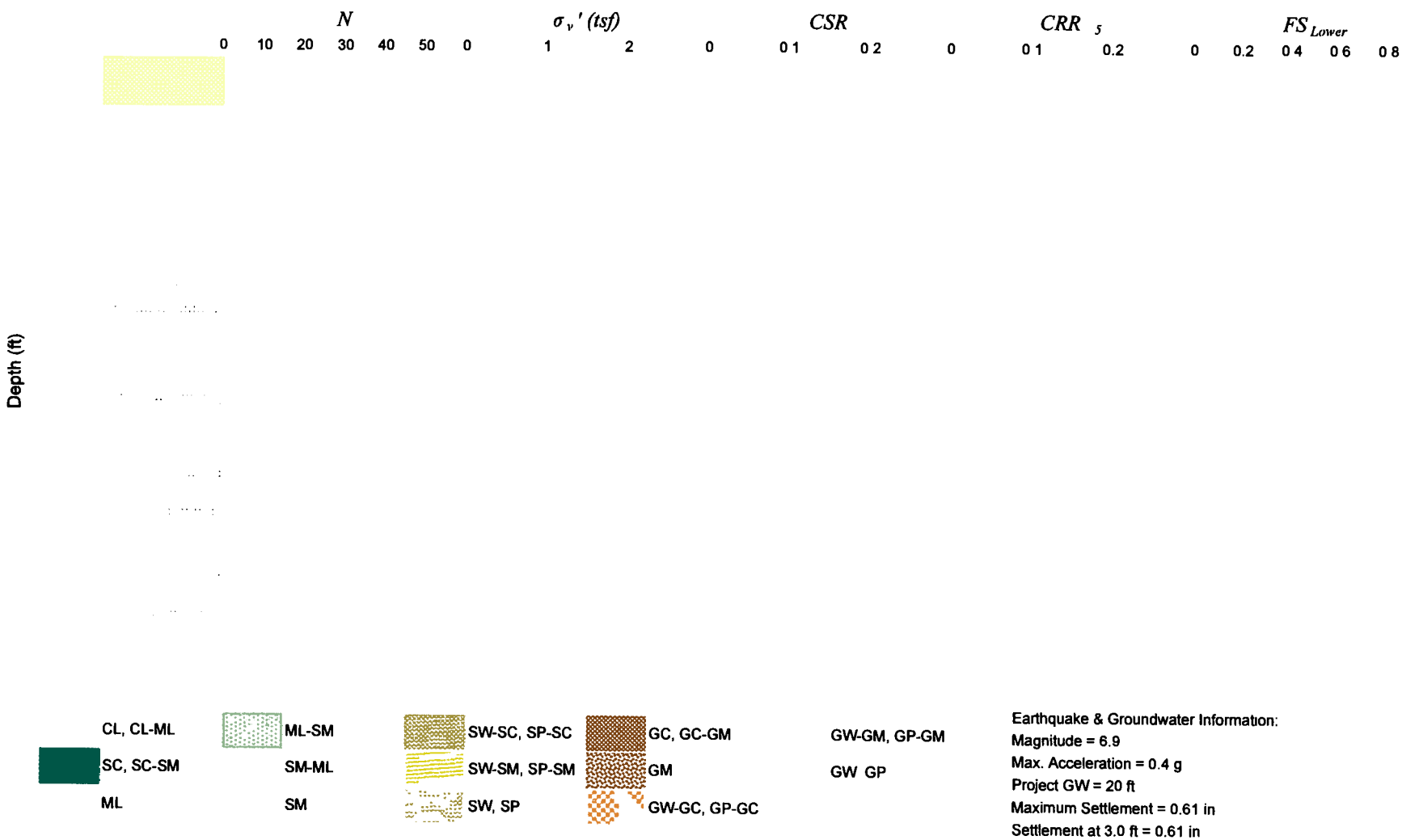
Prepared at 4/23/2009



Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.61 in
Settlement at 3.0 ft = 0.61 in

C.H.J. Incorporated

Liquefaction Analysis

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-2(Ring)	Enclosure:	D-2

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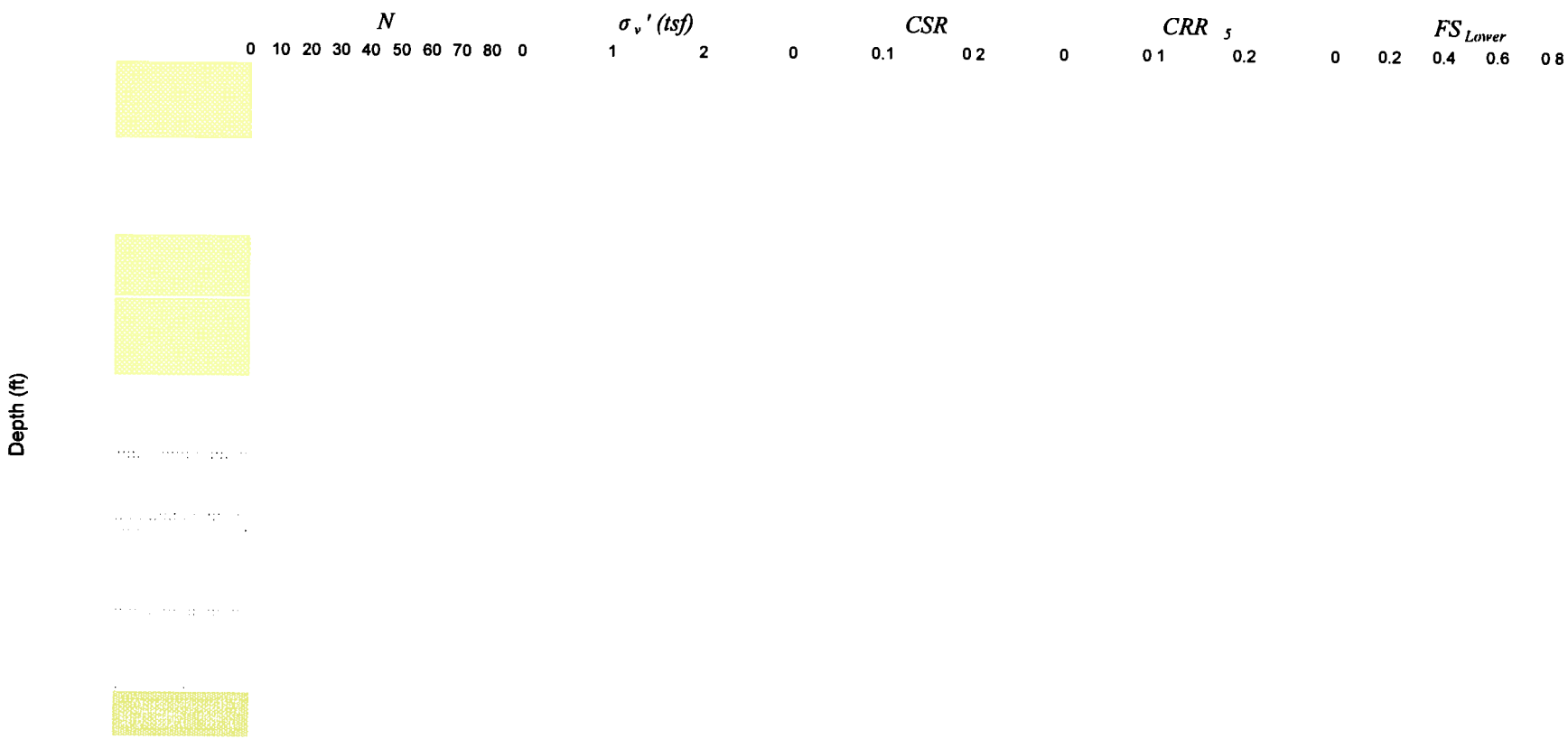

CL, CL-ML
SC, SC-SM
ML
ML-SM
SM-ML
SM
SW-SC, SP-SC
SW-SM, SP-SM
SW, SP
GC, GC-GM
GM
GW-GC, GP-GC
GW-GM GP-GM
GW GP

Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.38 in
Settlement at 3 0 ft = 0 38 in

C.H.J. Incorporated

Liquefaction Analysis

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-4(SPT)	Enclosure:	D-3

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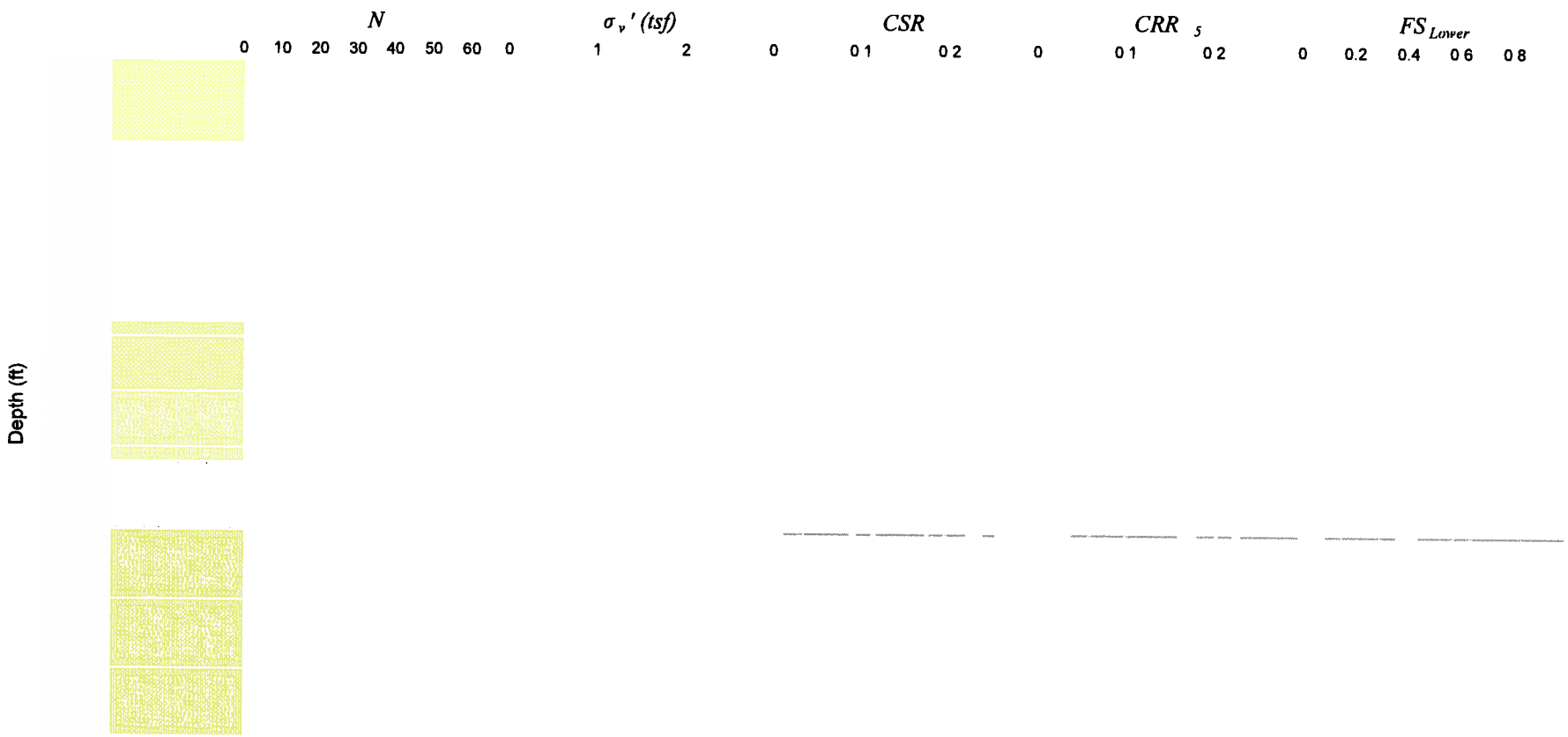

CL, CL-ML
SC, SC-SM
ML
ML-SM
SM-ML
SM
SW-SC, SP-SC
SW-SM, SP-SM
SW, SP
GC, GC-GM
GM
GW-GC, GP-GC
GW-GM, GP-GM
GW, GP

Earthquake & Groundwater Information
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.87 in
Settlement at 3.0 ft = 0.86 in

C.H.J. Incorporated

Liquefaction Analysis

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-5(SPT)	Enclosure.	D-4

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-5	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method		L_R=	3 ft		MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
1	0.3	8		0.02	0.02	1.70	17.2	1.00	0.26	0.18	3.57	Above GW	Above GW		
1	0.8	8		0.05	0.05	1.70	17.2	1.00	0.26	0.18	2.55	Above GW	Above GW		
1	1.3	8		0.08	0.08	1.70	17.2	1.00	0.26	0.18	2.19	Above GW	Above GW		
1	1.8	8		0.11	0.11	1.70	17.2	1.00	0.26	0.18	1.97	Above GW	Above GW		
1	2.3	8		0.14	0.14	1.70	17.2	1.00	0.26	0.18	1.83	Above GW	Above GW		
1	2.8	8		0.17	0.17	1.70	17.2	0.99	0.26	0.18	1.72	Above GW	Above GW		
1	3.3	8		0.20	0.20	1.70	17.2	0.99	0.26	0.18	1.63	Above GW	Above GW		
1	3.8	8		0.23	0.23	1.70	16.8	0.99	0.26	0.18	1.56	Above GW	Above GW		
2	4.3	8		0.26	0.26	1.70	16.8	0.99	0.26	0.18	1.50	Above GW	Above GW		
2	4.8	8		0.29	0.29	1.70	16.8	0.99	0.26	0.18	1.45	Above GW	Above GW		
2	5.3	8		0.32	0.32	1.70	16.8	0.99	0.26	0.18	1.41	Above GW	Above GW		
2	5.8	8		0.35	0.35	1.70	16.8	0.99	0.26	0.18	1.38	Above GW	Above GW		
2	6.3	8		0.38	0.38	1.63	16.3	0.99	0.26	0.17	1.34	Above GW	Above GW		
2	6.8	8		0.40	0.40	1.57	15.9	0.99	0.26	0.17	1.30	Above GW	Above GW		
2	7.3	8		0.43	0.43	1.52	15.5	0.98	0.26	0.17	1.27	Above GW	Above GW		
2	7.8	8		0.46	0.46	1.47	13.0	0.98	0.26	0.14	1.23	Above GW	Above GW		
3	8.3	6		0.49	0.49	1.42	12.8	0.98	0.26	0.14	1.20	Above GW	Above GW		
3	8.8	6		0.52	0.52	1.38	12.5	0.98	0.26	0.14	1.18	Above GW	Above GW		
3	9.3	6		0.55	0.55	1.34	12.3	0.98	0.25	0.13	1.16	Above GW	Above GW		
3	9.8	6		0.58	0.58	1.31	12.2	0.98	0.25	0.13	1.15	Above GW	Above GW		
3	10.3	6		0.62	0.62	1.27	12.1	0.98	0.25	0.13	1.13	Above GW	Above GW		
3	10.8	6		0.65	0.65	1.24	12.1	0.98	0.25	0.13	1.12	Above GW	Above GW		
3	11.3	6		0.68	0.68	1.22	12.0	0.98	0.25	0.13	1.10	Above GW	Above GW		
3	11.8	6		0.71	0.71	1.19	12.0	0.97	0.25	0.13	1.09	Above GW	Above GW		
3	12.3	6		0.74	0.74	1.16	11.9	0.97	0.25	0.13	1.08	Above GW	Above GW		
3	12.8	6		0.77	0.77	1.14	14.4	0.97	0.25	0.15	1.08	Above GW	Above GW		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-5	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
4	13.3	8		0.80	0.80	1.12	14.3	0.97	0.25	0.15	1.06	Above GW	Above GW		
4	13.8	8		0.83	0.83	1.10	14.2	0.97	0.25	0.15	1.05	Above GW	Above GW		
4	14.3	8		0.86	0.86	1.08	14.1	0.97	0.25	0.15	1.04	Above GW	Above GW		
4	14.8	8		0.89	0.89	1.06	14.1	0.97	0.25	0.15	1.03	Above GW	Above GW		
4	15.3	8		0.92	0.92	1.04	14.0	0.97	0.25	0.15	1.02	Above GW	Above GW		
4	15.8	8		0.95	0.95	1.02	13.9	0.97	0.25	0.15	1.01	Above GW	Above GW		
4	16.3	8		0.98	0.98	1.01	13.9	0.97	0.25	0.15	1.00	Above GW	Above GW		
4	16.8	8		1.02	1.02	0.99	13.8	0.96	0.25	0.15	1.00	Above GW	Above GW		
4	17.3	8		1.05	1.05	0.98	13.7	0.96	0.25	0.15	0.99	Above GW	Above GW		
4	17.8	8		1.08	1.08	0.96	14.8	0.96	0.25	0.16	0.98	Above GW	Above GW		
5	18.3	9		1.11	1.11	0.95	14.8	0.96	0.25	0.16	0.97	Above GW	Above GW		
5	18.8	9		1.14	1.14	0.94	14.7	0.96	0.25	0.16	0.96	Above GW	Above GW		
5	19.3	9		1.17	1.17	0.92	14.6	0.96	0.25	0.16	0.96	Above GW	Above GW		
5	19.8	9		1.20	1.20	0.91	14.6	0.96	0.25	0.16	0.95	Above GW	Above GW		
6	20.3	9	B. GW	1.23	1.23	0.90	14.5	0.96	0.25	0.15	0.94	0.72	0.77	1	1
6	20.8	9	B. GW	1.27	1.27	0.89	14.4	0.95	0.25	0.15	0.94	0.72	0.76	1	1
6	21.3	9	B. GW	1.30	1.30	0.88	14.4	0.95	0.25	0.15	0.93	0.71	0.76	1	1
6	21.8	9	B. GW	1.33	1.33	0.87	14.3	0.95	0.25	0.15	0.92	0.70	0.75	1	1
6	22.3	9	B. GW	1.36	1.36	0.86	14.2	0.95	0.25	0.15	0.92	0.70	0.74	1	1
6	22.8	9	B. GW	1.39	1.39	0.85	14.2	0.95	0.25	0.15	0.91	0.69	0.74	1	1
6	23.3	9	B. GW	1.42	1.42	0.84	14.1	0.95	0.25	0.15	0.91	0.69	0.73	1	1
6	23.8	9	B. GW	1.46	1.46	0.83	15.6	0.95	0.25	0.17	0.90	0.75	0.80	1	1
7	24.3	17	B. GW	1.49	1.49	0.82	15.5	0.94	0.25	0.17	0.89	0.74	0.79	1	1
7	24.8	17	B. GW	1.52	1.52	0.81	15.4	0.94	0.24	0.16	0.89	0.73	0.78	1	1
7	25.3	17	B. GW	1.56	1.56	0.80	15.3	0.94	0.24	0.16	0.88	0.72	0.77	1	1
7	25.8	17	B. GW	1.59	1.59	0.79	15.2	0.94	0.24	0.16	0.88	0.72	0.76	1	1

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-5	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method		L_R=	3 ft		MSF_{Lower}=	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper}=	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
7	26.3	17	B. GW	1.63	1.63	0.78	15.1	0.94	0.24	0.16	0.87	0.71	0.76	1	1
7	26.8	17	B. GW	1.66	1.66	0.78	15.0	0.93	0.24	0.16	0.87	0.71	0.75	1	1
7	27.3	17	B. GW	1.69	1.69	0.77	14.9	0.93	0.24	0.16	0.86	0.70	0.74	1	1
7	27.8	17	B. GW	1.73	1.73	0.76	49.0	0.93	0.24		0.77	NonLiq	NonLiq		
8	28.3	60	B. GW	1.76	1.75	0.76	48.7	0.93	0.24		0.77	NonLiq	NonLiq		
8	28.8	60	B. GW	1.80	1.77	0.75	48.4	0.93	0.24		0.76	NonLiq	NonLiq		
8	29.3	60	B. GW	1.83	1.79	0.75	48.2	0.92	0.25		0.76	NonLiq	NonLiq		
8	29.8	60	B. GW	1.86	1.81	0.74	47.9	0.92	0.25		0.76	NonLiq	NonLiq		
8	30.3	60	B. GW	1.90	1.83	0.74	47.7	0.92	0.25		0.75	NonLiq	NonLiq		
8	30.8	60	B. GW	1.93	1.85	0.74	47.5	0.92	0.25		0.75	NonLiq	NonLiq		
8	31.3	60	B. GW	1.97	1.86	0.73	47.2	0.91	0.25		0.75	NonLiq	NonLiq		
8	31.8	60	B. GW	2.00	1.88	0.73	47.0	0.91	0.25		0.74	NonLiq	NonLiq		
8	32.3	60	B. GW	2.03	1.90	0.73	46.8	0.91	0.25		0.74	NonLiq	NonLiq		
8	32.8	60	B. GW	2.07	1.92	0.72	46.6	0.90	0.25		0.74	NonLiq	NonLiq		
8	33.3	60	B. GW	2.10	1.94	0.72	46.4	0.90	0.25		0.73	NonLiq	NonLiq		
8	33.8	60	B. GW	2.14	1.96	0.71	46.1	0.90	0.25		0.73	NonLiq	NonLiq		
9	34.3	60	B. GW	2.17	1.98	0.71	45.9	0.89	0.26		0.73	NonLiq	NonLiq		
9	34.8	60	B. GW	2.21	2.00	0.71	45.7	0.89	0.26		0.72	NonLiq	NonLiq		
9	35.3	60	B. GW	2.25	2.02	0.70	45.4	0.89	0.26		0.72	NonLiq	NonLiq		
9	35.8	60	B. GW	2.29	2.04	0.70	45.2	0.88	0.26		0.72	NonLiq	NonLiq		
9	36.3	60	B. GW	2.32	2.06	0.70	45.0	0.88	0.26		0.71	NonLiq	NonLiq		
9	36.8	60	B. GW	2.36	2.09	0.69	44.8	0.88	0.26		0.71	NonLiq	NonLiq		
9	37.3	60	B. GW	2.40	2.11	0.69	44.5	0.87	0.26		0.71	NonLiq	NonLiq		
9	37.8	60	B. GW	2.43	2.13	0.69	44.4	0.87	0.26		0.70	NonLiq	NonLiq		
10	38.3	60	B. GW	2.46	2.14	0.68	44.2	0.86	0.26		0.70	NonLiq	NonLiq		
10	38.8	60	B. GW	2.50	2.16	0.68	44.0	0.86	0.26		0.70	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-5	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method		L_R=	3 ft		MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
10	39.3	60	B. GW	2.53	2.18	0.68	43.8	0.86	0.26		0.70	NonLiq	NonLiq		
10	39.8	60	B. GW	2.56	2.20	0.67	43.7	0.85	0.26		0.69	NonLiq	NonLiq		
10	40.3	60	B. GW	2.60	2.21	0.67	43.5	0.85	0.26		0.69	NonLiq	NonLiq		
10	40.8	60	B. GW	2.63	2.23	0.67	43.3	0.84	0.26		0.69	NonLiq	NonLiq		
10	41.3	60	B. GW	2.66	2.25	0.67	43.2	0.84	0.26		0.69	NonLiq	NonLiq		
10	41.8	60	B. GW	2.70	2.27	0.66	43.0	0.83	0.26		0.68	NonLiq	NonLiq		
10	42.3	60	B. GW	2.73	2.28	0.66	42.9	0.83	0.26		0.68	NonLiq	NonLiq		
10	42.8	60	B. GW	2.76	2.30	0.66	42.7	0.82	0.26		0.68	NonLiq	NonLiq		
10	43.3	60	B. GW	2.79	2.32	0.66	42.5	0.82	0.26		0.68	NonLiq	NonLiq		
10	43.8	60	B. GW	2.83	2.34	0.65	45.9	0.81	0.26		0.67	NonLiq	NonLiq		
11	44.3	60	B. GW	2.86	2.36	0.65	45.8	0.81	0.26		0.67	NonLiq	NonLiq		
11	44.8	60	B. GW	2.90	2.37	0.65	45.6	0.80	0.25		0.67	NonLiq	NonLiq		
11	45.3	60	B. GW	2.93	2.39	0.65	45.4	0.80	0.25		0.66	NonLiq	NonLiq		
11	45.8	60	B. GW	2.97	2.41	0.64	45.3	0.79	0.25		0.66	NonLiq	NonLiq		
11	46.3	60	B. GW	3.00	2.43	0.64	45.1	0.79	0.25		0.66	NonLiq	NonLiq		
11	46.8	60	B. GW	3.04	2.45	0.64	45.0	0.78	0.25		0.66	NonLiq	NonLiq		
11	47.3	60	B. GW	3.07	2.47	0.64	44.8	0.78	0.25		0.65	NonLiq	NonLiq		
11	47.8	60	B. GW	3.10	2.49	0.63	44.6	0.77	0.25		0.65	NonLiq	NonLiq		
12	48.3	60	B. GW	3.14	2.51	0.63	44.5	0.77	0.25		0.65	NonLiq	NonLiq		
12	48.8	60	B. GW	3.18	2.53	0.63	44.3	0.76	0.25		0.65	NonLiq	NonLiq		
12	49.3	60	B. GW	3.21	2.55	0.63	44.2	0.76	0.25		0.65	NonLiq	NonLiq		
12	49.8	60	B. GW	3.25	2.57	0.62	44.0	0.75	0.25		0.64	NonLiq	NonLiq		
12	50.3	60	B. GW	3.28	2.59	0.62	43.8	0.75	0.25		0.64	NonLiq	NonLiq		
12	50.8	60	B. GW	3.32	2.61	0.62	43.7	0.74	0.25		0.64	NonLiq	NonLiq		
12	51.3	60	B. GW	3.35	2.63	0.62	43.5	0.74	0.24		0.64	NonLiq	NonLiq		
12	51.8	60	B. GW	3.39	2.65	0.61	43.4	0.73	0.24		0.64	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-5	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method		L_R=	3 ft		MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
12	52.3	60	B. GW	3.42	2.67	0.61	43.3	0.73	0.24		0.63	NonLiq	NonLiq		
12	52.8	60	B. GW	3.46	2.69	0.61	43.1	0.72	0.24		0.63	NonLiq	NonLiq		
12	53.3	60	B. GW	3.49	2.70	0.61	43.0	0.72	0.24		0.63	NonLiq	NonLiq		
12	53.8	60	B. GW	3.53	2.72	0.61	39.4	0.71	0.24		0.64	NonLiq	NonLiq		
13	54.3	60	B. GW	3.56	2.74	0.60	39.3	0.71	0.24		0.64	NonLiq	NonLiq		
13	54.8	60	B. GW	3.60	2.76	0.60	39.1	0.70	0.24		0.64	NonLiq	NonLiq		
13	55.3	60	B. GW	3.63	2.78	0.60	39.0	0.70	0.24		0.63	NonLiq	NonLiq		
13	55.8	60	B. GW	3.67	2.80	0.60	38.8	0.69	0.24		0.63	NonLiq	NonLiq		
13	56.3	60	B. GW	3.71	2.82	0.59	38.7	0.69	0.24		0.63	NonLiq	NonLiq		
13	56.8	60	B. GW	3.74	2.84	0.59	38.6	0.68	0.23		0.63	NonLiq	NonLiq		
13	57.3	60	B. GW	3.78	2.87	0.59	38.5	0.68	0.23		0.63	NonLiq	NonLiq		
13	57.8	60	B. GW	3.81	2.89	0.59	38.3	0.68	0.23		0.63	NonLiq	NonLiq		
14	58.3	60	B. GW	3.85	2.91	0.59	38.2	0.67	0.23		0.63	NonLiq	NonLiq		
14	58.8	60	B. GW	3.88	2.93	0.58	38.1	0.67	0.23		0.62	NonLiq	NonLiq		
14	59.3	60	B. GW	3.92	2.95	0.58	38.0	0.66	0.23		0.62	NonLiq	NonLiq		
14	59.8	60	B. GW	3.96	2.97	0.58	37.8	0.66	0.23		0.62	NonLiq	NonLiq		
14	60.3	60	B. GW	3.99	2.99	0.58	37.7	0.66	0.23		0.62	NonLiq	NonLiq		
14	60.8	60	B. GW	4.03	3.01	0.58	37.6	0.65	0.23		0.62	NonLiq	NonLiq		
14	61.3	60	B. GW	4.06	3.03	0.57	37.5	0.65	0.23		0.62	NonLiq	NonLiq		
14	61.8	60	B. GW	4.10	3.05	0.57	37.4	0.64	0.23		0.62	NonLiq	NonLiq		
14	62.3	60	B. GW	4.13	3.07	0.57	37.2	0.64	0.22		0.61	NonLiq	NonLiq		
14	62.8	60	B. GW	4.17	3.09	0.57	37.1	0.64	0.22		0.61	NonLiq	NonLiq		
15	63.3	60	B. GW	4.21	3.11	0.57	37.0	0.63	0.22		0.61	NonLiq	NonLiq		
15	63.8	60	B. GW	4.24	3.13	0.57	36.9	0.63	0.22		0.61	NonLiq	NonLiq		
15	64.3	60	B. GW	4.28	3.15	0.56	36.8	0.63	0.22		0.61	NonLiq	NonLiq		
15	64.8	60	B. GW	4.31	3.17	0.56	36.7	0.62	0.22		0.61	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-5	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
15	65.3	60	B. GW	4.35	3.19	0.56	36.6	0.62	0.22		0.61	NonLiq	NonLiq		
15	65.8	60	B. GW	4.38	3.21	0.56	36.5	0.62	0.22		0.61	NonLiq	NonLiq		
15	66.3	60	B. GW	4.42	3.23	0.56	36.3	0.61	0.22		0.60	NonLiq	NonLiq		
15	66.8	60	B. GW	4.46	3.25	0.56	36.2	0.61	0.22		0.60	NonLiq	NonLiq		
15	67.3	60	B. GW	4.49	3.27	0.55	36.1	0.61	0.22		0.60	NonLiq	NonLiq		
15	67.8	60	B. GW	4.53	3.29	0.55	36.0	0.60	0.22		0.60	NonLiq	NonLiq		
16	68.3	60	B. GW	4.56	3.31	0.55	35.9	0.60	0.22		0.60	NonLiq	NonLiq		
16	68.8	60	B. GW	4.60	3.33	0.55	35.8	0.60	0.21		0.60	NonLiq	NonLiq		
16	69.3	60	B. GW	4.63	3.35	0.55	35.7	0.59	0.21		0.60	NonLiq	NonLiq		
16	69.8	60	B. GW	4.67	3.37	0.55	35.6	0.59	0.21		0.60	NonLiq	NonLiq		
16	70.3	60	B. GW	4.70	3.39	0.54	35.5	0.59	0.21		0.60	NonLiq	NonLiq		
16	70.8	60	B. GW	4.74	3.41	0.54	35.4	0.59	0.21		0.59	NonLiq	NonLiq		
16	71.3	60	B. GW	4.78	3.43	0.54	35.3	0.58	0.21		0.59	NonLiq	NonLiq		
16	71.8	60	B. GW	4.81	3.45	0.54	35.2	0.58	0.21		0.59	NonLiq	NonLiq		
16	72.3	60	B. GW	4.85	3.47	0.54	35.1	0.58	0.21		0.59	NonLiq	NonLiq		
16	72.8	60	B. GW	4.88	3.48	0.54	35.0	0.58	0.21		0.59	NonLiq	NonLiq		
17	73.3	60	B. GW	4.92	3.50	0.53	34.9	0.57	0.21		0.59	NonLiq	NonLiq		
17	73.8	60	B. GW	4.95	3.52	0.53	34.9	0.57	0.21		0.59	NonLiq	NonLiq		
17	74.3	60	B. GW	4.98	3.54	0.53	34.8	0.57	0.21		0.59	NonLiq	NonLiq		
17	74.8	60	B. GW	5.02	3.56	0.53	34.7	0.57	0.21		0.59	NonLiq	NonLiq		
17	75.3	60	B. GW	5.05	3.58	0.53	34.6	0.57	0.21		0.58	NonLiq	NonLiq		
17	75.8	60	B. GW	5.08	3.59	0.53	34.5	0.56	0.21		0.58	NonLiq	NonLiq		
17	76.3	60	B. GW	5.12	3.61	0.53	34.4	0.56	0.21		0.58	NonLiq	NonLiq		
17	76.8	60	B. GW	5.15	3.63	0.52	34.4	0.56	0.21		0.58	NonLiq	NonLiq		
17	77.3	60	B. GW	5.19	3.65	0.52	34.3	0.56	0.21		0.58	NonLiq	NonLiq		
17	77.8	60	B. GW	5.22	3.67	0.52	34.2	0.56	0.21		0.58	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-5	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
17	78.3	60	B. GW	5.25	3.69	0.52	34.1	0.55	0.21		0.58	NonLiq	NonLiq		
17	78.8	60	B. GW	5.29	3.70	0.52	37.2	0.55	0.20		0.57	NonLiq	NonLiq		
18	79.3	60	B. GW	5.32	3.72	0.52	37.2	0.55	0.20		0.57	NonLiq	NonLiq		
18	79.8	60	B. GW	5.35	3.74	0.52	37.1	0.55	0.20		0.56	NonLiq	NonLiq		
18	80.3	60	B. GW	5.39	3.75	0.52	37.0	0.55	0.20		0.56	NonLiq	NonLiq		
18	80.8	60	B. GW	5.42	3.77	0.51	36.9	0.54	0.20		0.56	NonLiq	NonLiq		
18	81.3	60	B. GW	5.45	3.79	0.51	36.9	0.54	0.20		0.56	NonLiq	NonLiq		
18	81.8	60	B. GW	5.48	3.81	0.51	36.8	0.54	0.20		0.56	NonLiq	NonLiq		
18	82.3	60	B. GW	5.52	3.82	0.51	36.7	0.54	0.20		0.56	NonLiq	NonLiq		
18	82.8	60	B. GW	5.55	3.84	0.51	36.6	0.54	0.20		0.56	NonLiq	NonLiq		
18	83.3	60	B. GW	5.58	3.86	0.51	36.6	0.54	0.20		0.56	NonLiq	NonLiq		
18	83.8	60	B. GW	5.61	3.88	0.51	36.5	0.54	0.20		0.56	NonLiq	NonLiq		
19	84.3	60	B. GW	5.65	3.89	0.51	36.4	0.53	0.20		0.56	NonLiq	NonLiq		
19	84.8	60	B. GW	5.68	3.91	0.51	36.3	0.53	0.20		0.56	NonLiq	NonLiq		
19	85.3	60	B. GW	5.72	3.93	0.50	36.2	0.53	0.20		0.56	NonLiq	NonLiq		
19	85.8	60	B. GW	5.75	3.95	0.50	36.2	0.53	0.20		0.55	NonLiq	NonLiq		
19	86.3	60	B. GW	5.79	3.97	0.50	36.1	0.53	0.20		0.55	NonLiq	NonLiq		
19	86.8	60	B. GW	5.82	3.99	0.50	36.0	0.53	0.20		0.55	NonLiq	NonLiq		
20	87.3	60	B. GW	5.86	4.01	0.50	35.9	0.53	0.20		0.55	NonLiq	NonLiq		
20	87.8	60	B. GW	5.89	4.03	0.50	35.8	0.52	0.20		0.55	NonLiq	NonLiq		
20	88.3	60	B. GW	5.93	4.05	0.50	35.8	0.52	0.20		0.55	NonLiq	NonLiq		
20	88.8	60	B. GW	5.97	4.07	0.50	35.7	0.52	0.20		0.55	NonLiq	NonLiq		
20	89.3	60	B. GW	6.00	4.09	0.49	35.6	0.52	0.20		0.55	NonLiq	NonLiq		
20	89.8	60	B. GW	6.04	4.11	0.49	35.5	0.52	0.20		0.55	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-6	Boring No.:	B-2(Ring)

Anticipated Magnitude	6.9	Boring GW (ft)	27	C_N=	Liao & Whiteman (1986) method		L_R=	3 ft		MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
1	0.3	8		0.02	0.02	1.70	17.2	1.00	0.26	0.18	3.57	Above GW	Above GW		
1	0.8	8		0.05	0.05	1.70	17.2	1.00	0.26	0.18	2.55	Above GW	Above GW		
1	1.3	8		0.08	0.08	1.70	17.2	1.00	0.26	0.18	2.19	Above GW	Above GW		
1	1.8	8		0.11	0.11	1.70	17.2	1.00	0.26	0.18	1.97	Above GW	Above GW		
1	2.3	8		0.14	0.14	1.70	17.2	1.00	0.26	0.18	1.83	Above GW	Above GW		
1	2.8	8		0.17	0.17	1.70	17.2	0.99	0.26	0.18	1.72	Above GW	Above GW		
1	3.3	8		0.20	0.20	1.70	17.2	0.99	0.26	0.18	1.63	Above GW	Above GW		
1	3.8	8		0.23	0.23	1.70	13.4	0.99	0.26	0.14	1.48	Above GW	Above GW		
2	4.3	6		0.26	0.26	1.70	13.4	0.99	0.26	0.14	1.44	Above GW	Above GW		
2	4.8	6		0.29	0.29	1.70	13.4	0.99	0.26	0.14	1.40	Above GW	Above GW		
2	5.3	6		0.32	0.32	1.70	13.4	0.99	0.26	0.14	1.36	Above GW	Above GW		
2	5.8	6		0.35	0.35	1.70	13.4	0.99	0.26	0.14	1.33	Above GW	Above GW		
2	6.3	6		0.38	0.38	1.63	13.1	0.99	0.26	0.14	1.30	Above GW	Above GW		
2	6.8	6		0.40	0.40	1.57	12.8	0.99	0.26	0.14	1.27	Above GW	Above GW		
2	7.3	6		0.43	0.43	1.52	12.5	0.98	0.26	0.14	1.24	Above GW	Above GW		
2	7.8	6		0.46	0.46	1.47	12.3	0.98	0.26	0.13	1.22	Above GW	Above GW		
2	8.3	6		0.49	0.49	1.43	12.1	0.98	0.26	0.13	1.20	Above GW	Above GW		
2	8.8	6		0.52	0.52	1.38	13.2	0.98	0.26	0.14	1.19	Above GW	Above GW		
3	9.3	7		0.55	0.55	1.35	13.0	0.98	0.25	0.14	1.17	Above GW	Above GW		
3	9.8	7		0.58	0.58	1.31	12.9	0.98	0.25	0.14	1.15	Above GW	Above GW		
3	10.3	7		0.61	0.61	1.28	12.8	0.98	0.25	0.14	1.14	Above GW	Above GW		
3	10.8	7		0.64	0.64	1.25	12.7	0.98	0.25	0.14	1.12	Above GW	Above GW		
3	11.3	7		0.67	0.67	1.22	12.7	0.98	0.25	0.14	1.11	Above GW	Above GW		
3	11.8	7		0.70	0.70	1.19	12.6	0.97	0.25	0.14	1.10	Above GW	Above GW		
3	12.3	7		0.73	0.73	1.17	12.6	0.97	0.25	0.14	1.08	Above GW	Above GW		
3	12.8	7		0.76	0.76	1.14	12.5	0.97	0.25	0.14	1.07	Above GW	Above GW		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-6	Boring No.:	B-2(Ring)

Anticipated Magnitude	6.9	Boring GW (ft)	27	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
3	13.3	7		0.80	0.80	1.12	12.4	0.97	0.25	0.14	1.06	Above GW	Above GW		
3	13.8	7		0.83	0.83	1.10	18.5	0.97	0.25	0.20	1.06	Above GW	Above GW		
4	14.3	12		0.86	0.86	1.08	18.4	0.97	0.25	0.20	1.05	Above GW	Above GW		
4	14.8	12		0.89	0.89	1.06	18.3	0.97	0.25	0.20	1.04	Above GW	Above GW		
4	15.3	12		0.92	0.92	1.04	18.2	0.97	0.25	0.19	1.03	Above GW	Above GW		
4	15.8	12		0.95	0.95	1.03	18.1	0.97	0.25	0.19	1.02	Above GW	Above GW		
4	16.3	12		0.98	0.98	1.01	18.0	0.97	0.25	0.19	1.01	Above GW	Above GW		
4	16.8	12		1.01	1.01	0.99	17.9	0.96	0.25	0.19	1.00	Above GW	Above GW		
4	17.3	12		1.04	1.04	0.98	17.8	0.96	0.25	0.19	0.99	Above GW	Above GW		
4	17.8	12		1.07	1.07	0.97	12.8	0.96	0.25	0.14	0.98	Above GW	Above GW		
5	18.3	12		1.11	1.11	0.95	12.7	0.96	0.25	0.14	0.97	Above GW	Above GW		
5	18.8	12		1.14	1.14	0.94	12.6	0.96	0.25	0.14	0.97	Above GW	Above GW		
5	19.3	12		1.17	1.17	0.93	12.5	0.96	0.25	0.14	0.96	Above GW	Above GW		
5	19.8	12		1.20	1.20	0.91	54.7	0.96	0.25		0.92	Above GW	Above GW		
6	20.3	60	B. GW	1.23	1.23	0.90	54.3	0.96	0.25		0.91	NonLiq	NonLiq		
6	20.8	60	B. GW	1.26	1.26	0.89	54.0	0.95	0.25		0.90	NonLiq	NonLiq		
6	21.3	60	B. GW	1.29	1.29	0.88	53.6	0.95	0.25		0.89	NonLiq	NonLiq		
6	21.8	60	B. GW	1.32	1.32	0.87	53.3	0.95	0.25		0.88	NonLiq	NonLiq		
6	22.3	60	B. GW	1.36	1.36	0.86	53.0	0.95	0.25		0.87	NonLiq	NonLiq		
6	22.8	60	B. GW	1.39	1.39	0.85	52.6	0.95	0.25		0.86	NonLiq	NonLiq		
7	23.3	60	B. GW	1.42	1.42	0.84	52.3	0.95	0.25		0.85	NonLiq	NonLiq		
7	23.8	60	B. GW	1.45	1.45	0.83	52.0	0.95	0.25		0.84	NonLiq	NonLiq		
7	24.3	60	B. GW	1.48	1.48	0.82	51.7	0.94	0.25		0.83	NonLiq	NonLiq		
7	24.8	60	B. GW	1.51	1.51	0.81	51.4	0.94	0.24		0.82	NonLiq	NonLiq		
7	25.3	60	B. GW	1.54	1.54	0.80	51.1	0.94	0.24		0.82	NonLiq	NonLiq		
7	25.8	60	B. GW	1.58	1.58	0.80	21.1	0.94	0.24	0.23	0.86	1.00	1.06	1	1

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-6	Boring No.:	B-2(Ring)

Anticipated Magnitude	6.9	Boring GW (ft)	27	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
8	26.3	24	B. GW	1.61	1.61	0.79	21.0	0.94	0.24	0.23	0.85	0.98	1.05	1	1
8	26.8	24	B. GW	1.65	1.65	0.78	20.9	0.93	0.24	0.23	0.85	0.97	1.03	1	1
9	27.3	24	B. GW	1.68	1.68	0.77	20.7	0.93	0.24	0.22	0.84	0.95	1.02	1	1
9	27.8	24	B. GW	1.72	1.70	0.77	20.6	0.93	0.25	0.22	0.84	0.94	1.00	1	1
9	28.3	24	B. GW	1.76	1.72	0.76	20.5	0.93	0.25	0.22	0.83	0.92	0.98	1	1
9	28.8	24	B. GW	1.79	1.74	0.76	20.4	0.93	0.25	0.22	0.83	0.91	0.97	1	1
9	29.3	24	B. GW	1.83	1.76	0.75	20.2	0.92	0.25	0.22	0.83	0.89	0.95	1	1
9	29.8	24	B. GW	1.87	1.78	0.75	20.1	0.92	0.25	0.22	0.83	0.88	0.94	1	1
9	30.3	24	B. GW	1.90	1.80	0.74	20.0	0.92	0.25	0.22	0.82	0.87	0.92	1	1
9	30.8	24	B. GW	1.94	1.82	0.74	19.9	0.92	0.25	0.21	0.82	0.86	0.91	1	1
9	31.3	24	B. GW	1.98	1.85	0.74	19.8	0.91	0.25	0.21	0.82	0.84	0.90	1	1
9	31.8	24	B. GW	2.01	1.87	0.73	19.7	0.91	0.26	0.21	0.82	0.83	0.89	1	1
9	32.3	24	B. GW	2.05	1.89	0.73	19.6	0.91	0.26	0.21	0.81	0.82	0.88	1	1
9	32.8	24	B. GW	2.09	1.91	0.72	46.7	0.90	0.26		0.74	NonLiq	NonLiq		
10	33.3	60	B. GW	2.12	1.92	0.72	46.5	0.90	0.26		0.74	NonLiq	NonLiq		
10	33.8	60	B. GW	2.15	1.94	0.72	46.3	0.90	0.26		0.73	NonLiq	NonLiq		
10	34.3	60	B. GW	2.19	1.96	0.71	46.1	0.89	0.26		0.73	NonLiq	NonLiq		
10	34.8	60	B. GW	2.22	1.98	0.71	45.9	0.89	0.26		0.73	NonLiq	NonLiq		
10	35.3	60	B. GW	2.25	1.99	0.71	45.7	0.89	0.26		0.72	NonLiq	NonLiq		
10	35.8	60	B. GW	2.29	2.01	0.70	45.5	0.88	0.26		0.72	NonLiq	NonLiq		
11	36.3	60	B. GW	2.32	2.03	0.70	45.3	0.88	0.26		0.72	NonLiq	NonLiq		
11	36.8	60	B. GW	2.35	2.05	0.70	45.1	0.88	0.26		0.71	NonLiq	NonLiq		
11	37.3	60	B. GW	2.39	2.07	0.70	44.9	0.87	0.26		0.71	NonLiq	NonLiq		
11	37.8	60	B. GW	2.42	2.09	0.69	44.7	0.87	0.26		0.71	NonLiq	NonLiq		
11	38.3	60	B. GW	2.46	2.11	0.69	44.5	0.86	0.26		0.71	NonLiq	NonLiq		
11	38.8	60	B. GW	2.49	2.13	0.69	44.4	0.86	0.26		0.70	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-6	Boring No.:	B-2(Ring)

Anticipated Magnitude	6.9	Boring GW (ft)	27	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
11	39.3	60	B. GW	2.53	2.15	0.68	44.2	0.86	0.26		0.70	NonLiq	NonLiq		
11	39.8	60	B. GW	2.56	2.16	0.68	44.0	0.85	0.26		0.70	NonLiq	NonLiq		
11	40.3	60	B. GW	2.60	2.18	0.68	43.8	0.85	0.26		0.69	NonLiq	NonLiq		
11	40.8	60	B. GW	2.63	2.20	0.67	43.6	0.84	0.26		0.69	NonLiq	NonLiq		
11	41.3	60	B. GW	2.67	2.22	0.67	43.4	0.84	0.26		0.69	NonLiq	NonLiq		
11	41.8	60	B. GW	2.70	2.24	0.67	43.3	0.83	0.26		0.69	NonLiq	NonLiq		
11	42.3	60	B. GW	2.73	2.26	0.67	43.1	0.83	0.26		0.69	NonLiq	NonLiq		
11	42.8	60	B. GW	2.77	2.28	0.66	42.9	0.82	0.26		0.68	NonLiq	NonLiq		
11	43.3	60	B. GW	2.80	2.30	0.66	42.7	0.82	0.26		0.68	NonLiq	NonLiq		
11	43.8	60	B. GW	2.84	2.32	0.66	42.6	0.81	0.26		0.68	NonLiq	NonLiq		
12	44.3	60	B. GW	2.87	2.34	0.65	42.4	0.81	0.26		0.68	NonLiq	NonLiq		
12	44.8	60	B. GW	2.91	2.36	0.65	42.2	0.80	0.26		0.67	NonLiq	NonLiq		
12	45.3	60	B. GW	2.94	2.38	0.65	42.1	0.80	0.26		0.67	NonLiq	NonLiq		
12	45.8	60	B. GW	2.98	2.39	0.65	41.9	0.79	0.26		0.67	NonLiq	NonLiq		
12	46.3	60	B. GW	3.01	2.41	0.64	41.7	0.79	0.26		0.67	NonLiq	NonLiq		
12	46.8	60	B. GW	3.05	2.43	0.64	41.6	0.78	0.26		0.67	NonLiq	NonLiq		
12	47.3	60	B. GW	3.09	2.45	0.64	41.4	0.78	0.25		0.66	NonLiq	NonLiq		
12	47.8	60	B. GW	3.12	2.47	0.64	41.3	0.77	0.25		0.66	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-7	Boring No.:	B-4(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	29	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
1	0.3	8		0.02	0.02	1.70	19.7	1.00	0.26	0.21	3.91	Above GW	Above GW		
1	0.8	8		0.05	0.05	1.70	19.7	1.00	0.26	0.21	2.73	Above GW	Above GW		
1	1.3	8		0.08	0.08	1.70	19.7	1.00	0.26	0.21	2.31	Above GW	Above GW		
1	1.8	8		0.11	0.11	1.70	19.7	1.00	0.26	0.21	2.07	Above GW	Above GW		
1	2.3	8		0.14	0.14	1.70	19.7	1.00	0.26	0.21	1.91	Above GW	Above GW		
1	2.8	8		0.17	0.17	1.70	19.7	0.99	0.26	0.21	1.79	Above GW	Above GW		
1	3.3	8		0.20	0.20	1.70	19.7	0.99	0.26	0.21	1.69	Above GW	Above GW		
1	3.8	8		0.23	0.23	1.70	19.7	0.99	0.26	0.21	1.62	Above GW	Above GW		
1	4.3	8		0.26	0.26	1.70	19.7	0.99	0.26	0.21	1.55	Above GW	Above GW		
1	4.8	8		0.29	0.29	1.70	12.7	0.99	0.26	0.14	1.38	Above GW	Above GW		
2	5.3	4		0.32	0.32	1.70	12.7	0.99	0.26	0.14	1.35	Above GW	Above GW		
2	5.8	4		0.35	0.35	1.69	12.7	0.99	0.26	0.14	1.32	Above GW	Above GW		
2	6.3	4		0.38	0.38	1.63	12.4	0.99	0.26	0.13	1.28	Above GW	Above GW		
2	6.8	4		0.41	0.41	1.57	12.1	0.99	0.26	0.13	1.26	Above GW	Above GW		
2	7.3	4		0.44	0.44	1.51	11.9	0.98	0.26	0.13	1.23	Above GW	Above GW		
2	7.8	4		0.47	0.47	1.47	11.6	0.98	0.26	0.13	1.21	Above GW	Above GW		
2	8.3	4		0.49	0.49	1.42	11.4	0.98	0.26	0.13	1.19	Above GW	Above GW		
2	8.8	4		0.52	0.52	1.38	11.3	0.98	0.26	0.12	1.17	Above GW	Above GW		
2	9.3	4		0.55	0.55	1.34	11.1	0.98	0.25	0.12	1.16	Above GW	Above GW		
2	9.8	4		0.58	0.58	1.31	11.0	0.98	0.25	0.12	1.14	Above GW	Above GW		
2	10.3	4		0.61	0.61	1.28	11.0	0.98	0.25	0.12	1.13	Above GW	Above GW		
2	10.8	4		0.64	0.64	1.25	12.9	0.98	0.25	0.14	1.12	Above GW	Above GW		
3	11.3	6		0.67	0.67	1.22	12.8	0.98	0.25	0.14	1.11	Above GW	Above GW		
3	11.8	6		0.70	0.70	1.19	12.8	0.97	0.25	0.14	1.10	Above GW	Above GW		
3	12.3	6		0.73	0.73	1.17	12.7	0.97	0.25	0.14	1.08	Above GW	Above GW		
3	12.8	6		0.76	0.76	1.15	12.6	0.97	0.25	0.14	1.07	Above GW	Above GW		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-7	Boring No.:	B-4(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	29	C_N=	Liao & Whiteman (1986) method		L_R=	3 ft		MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
3	13.3	6		0.79	0.79	1.12	12.6	0.97	0.25	0.14	1.06	Above GW	Above GW		
3	13.8	6		0.82	0.82	1.10	12.5	0.97	0.25	0.14	1.05	Above GW	Above GW		
3	14.3	6		0.85	0.85	1.08	12.5	0.97	0.25	0.14	1.04	Above GW	Above GW		
3	14.8	6		0.88	0.88	1.06	18.0	0.97	0.25	0.19	1.04	Above GW	Above GW		
4	15.3	10		0.92	0.92	1.05	17.9	0.97	0.25	0.19	1.03	Above GW	Above GW		
4	15.8	10		0.95	0.95	1.03	17.8	0.97	0.25	0.19	1.02	Above GW	Above GW		
4	16.3	10		0.98	0.98	1.01	17.7	0.97	0.25	0.19	1.01	Above GW	Above GW		
4	16.8	10		1.01	1.01	1.00	17.6	0.96	0.25	0.19	1.00	Above GW	Above GW		
4	17.3	10		1.04	1.04	0.98	17.5	0.96	0.25	0.19	0.99	Above GW	Above GW		
4	17.8	10		1.07	1.07	0.97	17.4	0.96	0.25	0.19	0.98	Above GW	Above GW		
4	18.3	10		1.10	1.10	0.95	17.3	0.96	0.25	0.18	0.97	Above GW	Above GW		
4	18.8	10		1.13	1.13	0.94	17.2	0.96	0.25	0.18	0.96	Above GW	Above GW		
4	19.3	10		1.16	1.16	0.93	17.1	0.96	0.25	0.18	0.96	Above GW	Above GW		
4	19.8	10		1.19	1.19	0.91	89.4	0.96	0.25		0.92	Above GW	Above GW		
5	20.3	83	B. GW	1.23	1.23	0.90	88.8	0.96	0.25		0.91	NonLiq	NonLiq		
5	20.8	83	B. GW	1.26	1.26	0.89	88.3	0.95	0.25		0.90	NonLiq	NonLiq		
5	21.3	83	B. GW	1.29	1.29	0.88	87.7	0.95	0.25		0.89	NonLiq	NonLiq		
5	21.8	83	B. GW	1.32	1.32	0.87	87.1	0.95	0.25		0.88	NonLiq	NonLiq		
5	22.3	83	B. GW	1.35	1.35	0.86	86.6	0.95	0.25		0.87	NonLiq	NonLiq		
5	22.8	83	B. GW	1.38	1.38	0.85	86.0	0.95	0.25		0.86	NonLiq	NonLiq		
5	23.3	83	B. GW	1.41	1.41	0.84	85.5	0.95	0.25		0.85	NonLiq	NonLiq		
5	23.8	83	B. GW	1.45	1.45	0.83	85.0	0.95	0.25		0.84	NonLiq	NonLiq		
5	24.3	83	B. GW	1.48	1.48	0.82	84.5	0.94	0.25		0.83	NonLiq	NonLiq		
5	24.8	83	B. GW	1.51	1.51	0.81	61.5	0.94	0.24		0.82	NonLiq	NonLiq		
6	25.3	60	B. GW	1.54	1.54	0.80	61.1	0.94	0.24		0.82	NonLiq	NonLiq		
6	25.8	60	B. GW	1.58	1.58	0.80	60.7	0.94	0.24		0.81	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-7	Boring No.:	B-4(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	29	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
6	26.3	60	B. GW	1.61	1.61	0.79	60.3	0.94	0.24		0.80	NonLiq	NonLiq		
6	26.8	60	B. GW	1.65	1.65	0.78	59.9	0.93	0.24		0.79	NonLiq	NonLiq		
6	27.3	60	B. GW	1.68	1.68	0.77	59.3	0.93	0.24		0.78	NonLiq	NonLiq		
6	27.8	60	B. GW	1.71	1.71	0.76	58.7	0.93	0.24		0.78	NonLiq	NonLiq		
6	28.3	60	B. GW	1.75	1.75	0.76	58.2	0.93	0.24		0.77	NonLiq	NonLiq		
6	28.8	60	B. GW	1.78	1.78	0.75	57.6	0.93	0.24		0.76	NonLiq	NonLiq		
7	29.3	60	B. GW	1.82	1.81	0.74	57.2	0.92	0.24		0.76	NonLiq	NonLiq		
7	29.8	60	B. GW	1.85	1.83	0.74	56.9	0.92	0.24		0.75	NonLiq	NonLiq		
8	30.3	60	B. GW	1.89	1.85	0.74	56.6	0.92	0.24		0.75	NonLiq	NonLiq		
8	30.8	60	B. GW	1.93	1.87	0.73	56.3	0.92	0.24		0.75	NonLiq	NonLiq		
8	31.3	60	B. GW	1.96	1.89	0.73	56.0	0.91	0.25		0.74	NonLiq	NonLiq		
8	31.8	60	B. GW	2.00	1.91	0.72	55.7	0.91	0.25		0.74	NonLiq	NonLiq		
8	32.3	60	B. GW	2.04	1.93	0.72	55.4	0.91	0.25		0.73	NonLiq	NonLiq		
8	32.8	60	B. GW	2.07	1.96	0.72	55.1	0.90	0.25		0.73	NonLiq	NonLiq		
8	33.3	60	B. GW	2.11	1.98	0.71	54.8	0.90	0.25		0.73	NonLiq	NonLiq		
8	33.8	60	B. GW	2.15	2.00	0.71	54.5	0.90	0.25		0.72	NonLiq	NonLiq		
8	34.3	60	B. GW	2.18	2.02	0.70	54.2	0.89	0.25		0.72	NonLiq	NonLiq		
8	34.8	60	B. GW	2.22	2.04	0.70	54.0	0.89	0.25		0.72	NonLiq	NonLiq		
9	35.3	60	B. GW	2.25	2.06	0.70	53.8	0.89	0.25		0.71	NonLiq	NonLiq		
9	35.8	60	B. GW	2.28	2.07	0.69	53.6	0.88	0.25		0.71	NonLiq	NonLiq		
9	36.3	60	B. GW	2.32	2.09	0.69	53.3	0.88	0.25		0.71	NonLiq	NonLiq		
9	36.8	60	B. GW	2.35	2.11	0.69	53.1	0.88	0.25		0.71	NonLiq	NonLiq		
9	37.3	60	B. GW	2.38	2.13	0.69	52.9	0.87	0.25		0.70	NonLiq	NonLiq		
9	37.8	60	B. GW	2.42	2.14	0.68	52.7	0.87	0.25		0.70	NonLiq	NonLiq		
9	38.3	60	B. GW	2.45	2.16	0.68	52.5	0.86	0.25		0.70	NonLiq	NonLiq		
9	38.8	60	B. GW	2.48	2.18	0.68	52.3	0.86	0.25		0.69	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-7	Boring No.:	B-4(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	29	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
9	39.3	60	B. GW	2.52	2.20	0.67	52.1	0.86	0.25		0.69	NonLiq	NonLiq		
9	39.8	60	B. GW	2.55	2.21	0.67	51.9	0.85	0.25		0.69	NonLiq	NonLiq		
10	40.3	60	B. GW	2.58	2.23	0.67	51.7	0.85	0.25		0.69	NonLiq	NonLiq		
10	40.8	60	B. GW	2.62	2.25	0.67	51.5	0.84	0.25		0.68	NonLiq	NonLiq		
10	41.3	60	B. GW	2.65	2.27	0.66	51.3	0.84	0.25		0.68	NonLiq	NonLiq		
10	41.8	60	B. GW	2.69	2.29	0.66	51.1	0.83	0.25		0.68	NonLiq	NonLiq		
10	42.3	60	B. GW	2.72	2.31	0.66	50.8	0.83	0.25		0.68	NonLiq	NonLiq		
10	42.8	60	B. GW	2.76	2.33	0.66	50.6	0.82	0.25		0.67	NonLiq	NonLiq		

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Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-8	Boring No.:	B-5(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
1	0.3	8		0.02	0.02	1.70	19.7	1.00	0.26	0.21	3.91	Above GW	Above GW		
1	0.8	8		0.05	0.05	1.70	19.7	1.00	0.26	0.21	2.73	Above GW	Above GW		
1	1.3	8		0.08	0.08	1.70	19.7	1.00	0.26	0.21	2.31	Above GW	Above GW		
1	1.8	8		0.11	0.11	1.70	19.7	1.00	0.26	0.21	2.07	Above GW	Above GW		
1	2.3	8		0.14	0.14	1.70	19.7	1.00	0.26	0.21	1.91	Above GW	Above GW		
1	2.8	8		0.17	0.17	1.70	19.7	0.99	0.26	0.21	1.79	Above GW	Above GW		
1	3.3	8		0.20	0.20	1.70	19.7	0.99	0.26	0.21	1.69	Above GW	Above GW		
1	3.8	8		0.23	0.23	1.70	19.7	0.99	0.26	0.21	1.62	Above GW	Above GW		
1	4.3	8		0.26	0.26	1.70	19.7	0.99	0.26	0.21	1.55	Above GW	Above GW		
1	4.8	8		0.29	0.29	1.70	19.7	0.99	0.26	0.21	1.50	Above GW	Above GW		
1	5.3	8		0.32	0.32	1.70	19.7	0.99	0.26	0.21	1.45	Above GW	Above GW		
1	5.8	8		0.35	0.35	1.68	25.4	0.99	0.26	0.30	1.47	Above GW	Above GW		
2	6.3	11		0.38	0.38	1.62	24.6	0.99	0.26	0.28	1.42	Above GW	Above GW		
2	6.8	11		0.41	0.41	1.56	23.9	0.99	0.26	0.27	1.38	Above GW	Above GW		
2	7.3	11		0.44	0.44	1.51	23.2	0.98	0.26	0.26	1.34	Above GW	Above GW		
2	7.8	11		0.47	0.47	1.46	22.7	0.98	0.26	0.25	1.30	Above GW	Above GW		
2	8.3	11		0.50	0.50	1.42	22.1	0.98	0.26	0.24	1.27	Above GW	Above GW		
2	8.8	11		0.53	0.53	1.38	15.4	0.98	0.26	0.16	1.20	Above GW	Above GW		
3	9.3	7		0.56	0.56	1.34	15.1	0.98	0.25	0.16	1.18	Above GW	Above GW		
3	9.8	7		0.59	0.59	1.30	15.0	0.98	0.25	0.16	1.16	Above GW	Above GW		
3	10.3	7		0.62	0.62	1.27	14.9	0.98	0.25	0.16	1.15	Above GW	Above GW		
3	10.8	7		0.65	0.65	1.24	14.8	0.98	0.25	0.16	1.13	Above GW	Above GW		
3	11.3	7		0.68	0.68	1.21	14.7	0.98	0.25	0.16	1.11	Above GW	Above GW		
3	11.8	7		0.71	0.71	1.19	14.6	0.97	0.25	0.16	1.10	Above GW	Above GW		
3	12.3	7		0.74	0.74	1.16	14.6	0.97	0.25	0.16	1.09	Above GW	Above GW		
3	12.8	7		0.77	0.77	1.14	14.5	0.97	0.25	0.16	1.08	Above GW	Above GW		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-8	Boring No.:	B-5(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
3	13.3	7		0.80	0.80	1.12	14.4	0.97	0.25	0.15	1.06	Above GW	Above GW		
3	13.8	7		0.83	0.83	1.10	16.2	0.97	0.25	0.17	1.06	Above GW	Above GW		
4	14.3	8		0.86	0.86	1.08	16.1	0.97	0.25	0.17	1.04	Above GW	Above GW		
4	14.8	8		0.89	0.89	1.06	16.1	0.97	0.25	0.17	1.03	Above GW	Above GW		
4	15.3	8		0.93	0.93	1.04	16.0	0.97	0.25	0.17	1.02	Above GW	Above GW		
4	15.8	8		0.96	0.96	1.02	15.9	0.97	0.25	0.17	1.01	Above GW	Above GW		
4	16.3	8		0.99	0.99	1.01	15.8	0.97	0.25	0.17	1.00	Above GW	Above GW		
4	16.8	8		1.02	1.02	0.99	15.7	0.96	0.25	0.17	0.99	Above GW	Above GW		
4	17.3	8		1.05	1.05	0.98	15.7	0.96	0.25	0.17	0.99	Above GW	Above GW		
4	17.8	8		1.08	1.08	0.96	15.6	0.96	0.25	0.17	0.98	Above GW	Above GW		
4	18.3	8		1.11	1.11	0.95	15.5	0.96	0.25	0.17	0.97	Above GW	Above GW		
4	18.8	8		1.14	1.14	0.94	18.9	0.96	0.25	0.20	0.96	Above GW	Above GW		
5	19.3	11		1.17	1.17	0.92	18.8	0.96	0.25	0.20	0.95	Above GW	Above GW		
5	19.8	11		1.20	1.20	0.91	18.7	0.96	0.25	0.20	0.94	Above GW	Above GW		
6	20.3	11	B. GW	1.24	1.24	0.90	18.6	0.96	0.25	0.20	0.94	0.92	0.98	1	1
6	20.8	11	B. GW	1.27	1.27	0.89	18.5	0.95	0.25	0.20	0.93	0.91	0.97	1	1
6	21.3	11	B. GW	1.30	1.30	0.88	18.4	0.95	0.25	0.20	0.92	0.90	0.96	1	1
6	21.8	11	B. GW	1.33	1.33	0.87	18.4	0.95	0.25	0.20	0.91	0.89	0.95	1	1
6	22.3	11	B. GW	1.36	1.36	0.86	18.3	0.95	0.25	0.19	0.91	0.88	0.94	1	1
6	22.8	11	B. GW	1.39	1.39	0.85	18.2	0.95	0.25	0.19	0.90	0.87	0.93	1	1
6	23.3	11	B. GW	1.42	1.42	0.84	18.1	0.95	0.25	0.19	0.90	0.87	0.92	1	1
6	23.8	11	B. GW	1.46	1.46	0.83	20.0	0.95	0.25	0.22	0.88	0.96	1.02	1	1
7	24.3	18	B. GW	1.49	1.49	0.82	19.9	0.94	0.25	0.21	0.88	0.94	1.01	1	1
7	24.8	18	B. GW	1.52	1.52	0.81	19.8	0.94	0.24	0.21	0.87	0.93	0.99	1	1
7	25.3	18	B. GW	1.56	1.56	0.80	19.7	0.94	0.24	0.21	0.86	0.92	0.98	1	1
7	25.8	18	B. GW	1.59	1.59	0.79	19.6	0.94	0.24	0.21	0.86	0.91	0.97	1	1

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-8	Boring No.:	B-5(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
7	26.3	18	B. GW	1.63	1.63	0.78	19.4	0.94	0.24	0.21	0.85	0.90	0.96	1	1
7	26.8	18	B. GW	1.66	1.66	0.78	19.3	0.93	0.24	0.21	0.85	0.89	0.95	1	1
7	27.3	18	B. GW	1.69	1.69	0.77	19.2	0.93	0.24	0.21	0.84	0.88	0.94	1	1
7	27.8	18	B. GW	1.73	1.73	0.76	19.0	0.93	0.24	0.20	0.84	0.87	0.93	1	1
8	28.3	18	B. GW	1.76	1.76	0.75	18.9	0.93	0.24	0.20	0.84	0.86	0.91	1	1
8	28.8	18	B. GW	1.80	1.77	0.75	57.9	0.93	0.24		0.76	NonLiq	NonLiq		
9	29.3	60	B. GW	1.84	1.80	0.75	57.6	0.92	0.25		0.76	NonLiq	NonLiq		
9	29.8	60	B. GW	1.87	1.82	0.74	57.3	0.92	0.25		0.76	NonLiq	NonLiq		
9	30.3	60	B. GW	1.91	1.84	0.74	56.9	0.92	0.25		0.75	NonLiq	NonLiq		
9	30.8	60	B. GW	1.95	1.86	0.73	56.6	0.92	0.25		0.75	NonLiq	NonLiq		
9	31.3	60	B. GW	1.98	1.88	0.73	56.3	0.91	0.25		0.74	NonLiq	NonLiq		
9	31.8	60	B. GW	2.02	1.90	0.73	56.0	0.91	0.25		0.74	NonLiq	NonLiq		
9	32.3	60	B. GW	2.06	1.92	0.72	55.7	0.91	0.25		0.74	NonLiq	NonLiq		
9	32.8	60	B. GW	2.09	1.94	0.72	55.4	0.90	0.25		0.73	NonLiq	NonLiq		
9	33.3	60	B. GW	2.13	1.97	0.71	55.1	0.90	0.25		0.73	NonLiq	NonLiq		
9	33.8	60	B. GW	2.16	1.99	0.71	54.7	0.90	0.25		0.73	NonLiq	NonLiq		
10	34.3	60	B. GW	2.20	2.00	0.71	54.5	0.89	0.26		0.72	NonLiq	NonLiq		
10	34.8	60	B. GW	2.23	2.02	0.70	54.2	0.89	0.26		0.72	NonLiq	NonLiq		
10	35.3	60	B. GW	2.26	2.04	0.70	54.0	0.89	0.26		0.72	NonLiq	NonLiq		
10	35.8	60	B. GW	2.30	2.06	0.70	53.8	0.88	0.26		0.71	NonLiq	NonLiq		
10	36.3	60	B. GW	2.33	2.07	0.69	53.6	0.88	0.26		0.71	NonLiq	NonLiq		
10	36.8	60	B. GW	2.36	2.09	0.69	53.3	0.88	0.26		0.71	NonLiq	NonLiq		
10	37.3	60	B. GW	2.40	2.11	0.69	53.1	0.87	0.26		0.71	NonLiq	NonLiq		
10	37.8	60	B. GW	2.43	2.13	0.69	52.9	0.87	0.26		0.70	NonLiq	NonLiq		
10	38.3	60	B. GW	2.46	2.14	0.68	52.7	0.86	0.26		0.70	NonLiq	NonLiq		
10	38.8	60	B. GW	2.50	2.16	0.68	52.5	0.86	0.26		0.70	NonLiq	NonLiq		

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LIQUEFACTION ANALYSIS

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-8	Boring No.:	B-5(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth (ft)	Field Blow Count	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$
11	39.3	60	B. GW	2.53	2.18	0.68	52.3	0.86	0.26		0.69	NonLiq	NonLiq		
11	39.8	60	B. GW	2.57	2.20	0.67	52.1	0.85	0.26		0.69	NonLiq	NonLiq		
11	40.3	60	B. GW	2.60	2.22	0.67	51.8	0.85	0.26		0.69	NonLiq	NonLiq		
11	40.8	60	B. GW	2.63	2.24	0.67	51.6	0.84	0.26		0.69	NonLiq	NonLiq		
11	41.3	60	B. GW	2.67	2.26	0.67	51.4	0.84	0.26		0.68	NonLiq	NonLiq		
11	41.8	60	B. GW	2.70	2.27	0.66	51.2	0.83	0.26		0.68	NonLiq	NonLiq		
11	42.3	60	B. GW	2.74	2.29	0.66	51.0	0.83	0.26		0.68	NonLiq	NonLiq		
11	42.8	60	B. GW	2.77	2.31	0.66	50.8	0.82	0.26		0.68	NonLiq	NonLiq		
11	43.3	60	B. GW	2.81	2.33	0.65	50.6	0.82	0.26		0.67	NonLiq	NonLiq		
11	43.8	60	B. GW	2.84	2.35	0.65	50.4	0.81	0.26		0.67	NonLiq	NonLiq		
12	44.3	60	B. GW	2.88	2.37	0.65	50.2	0.81	0.26		0.67	NonLiq	NonLiq		
12	44.8	60	B. GW	2.91	2.39	0.65	50.0	0.80	0.25		0.66	NonLiq	NonLiq		
12	45.3	60	B. GW	2.95	2.41	0.64	49.8	0.80	0.25		0.66	NonLiq	NonLiq		
12	45.8	60	B. GW	2.98	2.43	0.64	49.6	0.79	0.25		0.66	NonLiq	NonLiq		
12	46.3	60	B. GW	3.02	2.45	0.64	49.4	0.79	0.25		0.66	NonLiq	NonLiq		
12	46.8	60	B. GW	3.05	2.47	0.64	49.2	0.78	0.25		0.65	NonLiq	NonLiq		
12	47.3	60	B. GW	3.09	2.49	0.63	49.0	0.78	0.25		0.65	NonLiq	NonLiq		
12	47.8	60	B. GW	3.12	2.51	0.63	48.9	0.77	0.25		0.65	NonLiq	NonLiq		
12	48.3	60	B. GW	3.16	2.53	0.63	48.7	0.77	0.25		0.65	NonLiq	NonLiq		
12	48.8	60	B. GW	3.19	2.55	0.63	48.5	0.76	0.25		0.65	NonLiq	NonLiq		

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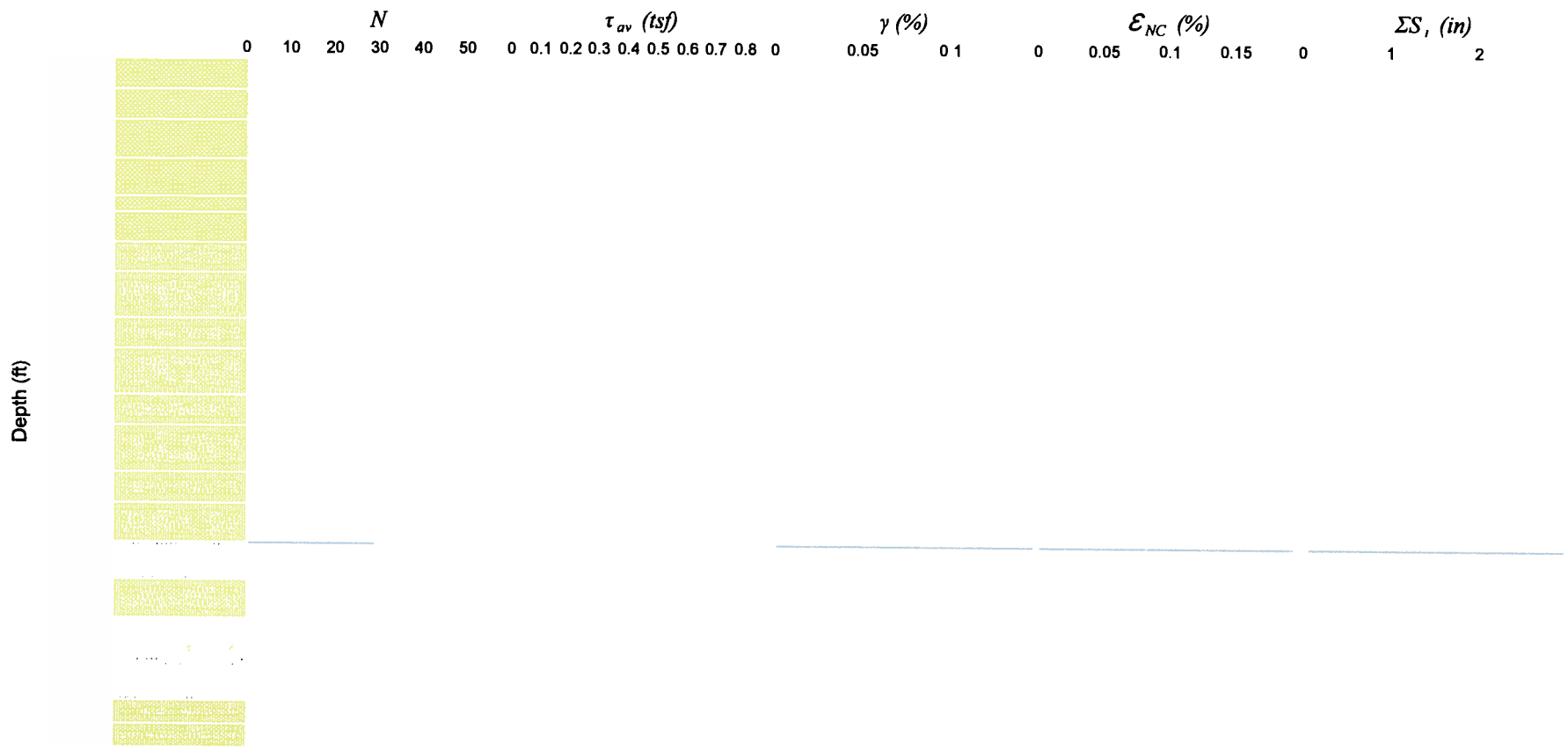

CL CL-ML
SC, SC-SM
ML
ML-SM
SM-ML
SM
SW-SC, SP-SC
SW-SM, SP-SM
SW, SP
GC, GC-GM
GM
GW-GC, GP-GC
GW-GM, GP-GM
GW, GP

Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 2.07 in
Settlement at 3.0 ft = 2.06 in

C.H.J. Incorporated

Seismic Settlement of Dry Sands

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-1	Enclosure:	D-9

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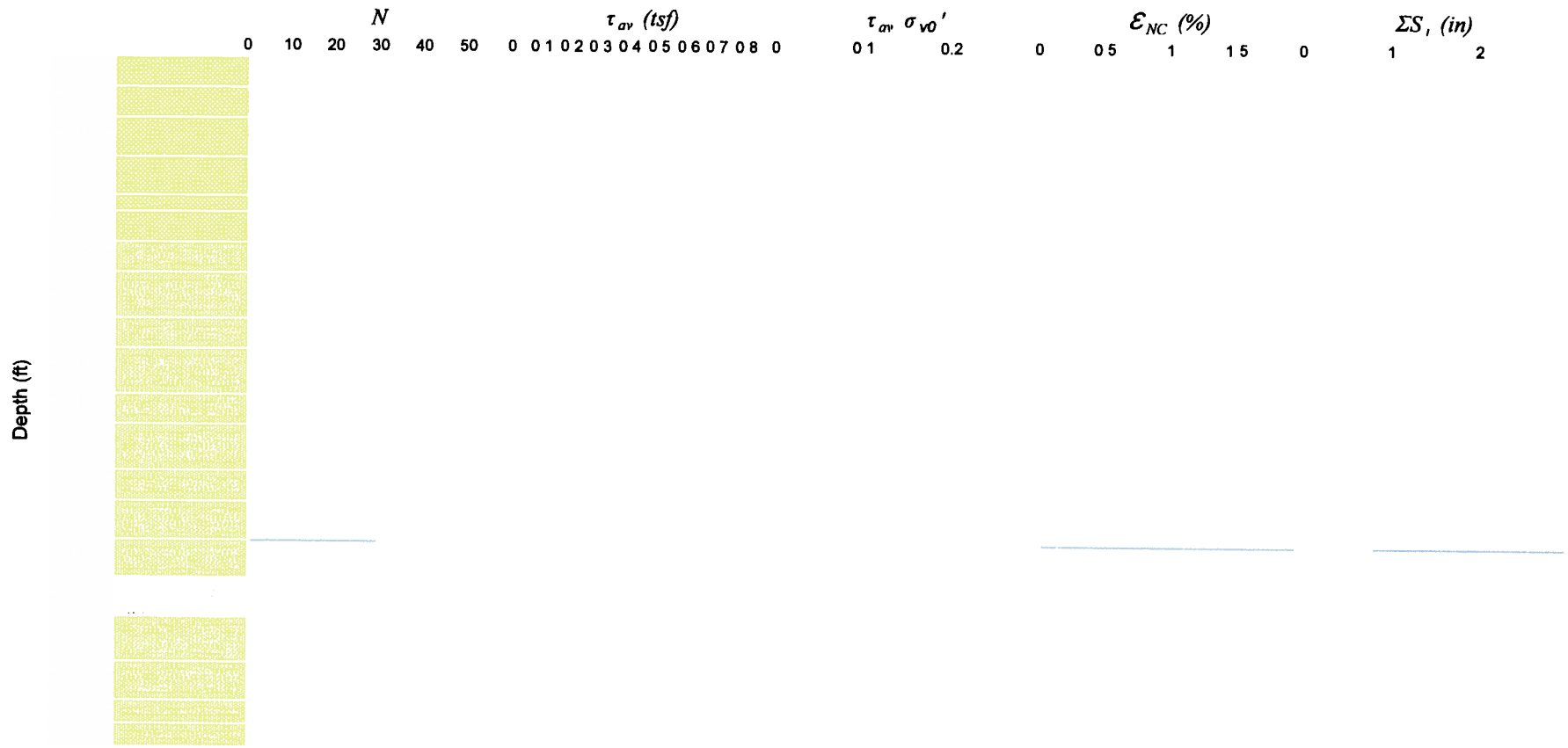

CL, CL-ML
SC, SC-SM
ML
ML-SM
SM-ML
SM
SW-SC, SP-SC
SW-SM, SP-SM
SW, SP
GC, GC-GM
GM
GW-GC GP-GC
GW-GM, GP-GM
GW, GP

Earthquake & Groundwater Information
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 2.07 in
Settlement at 3 0 ft = 2 06 in

C.H.J. Incorporated

Seismic Settlement of Saturated Sands

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-1	Enclosure:	D-10

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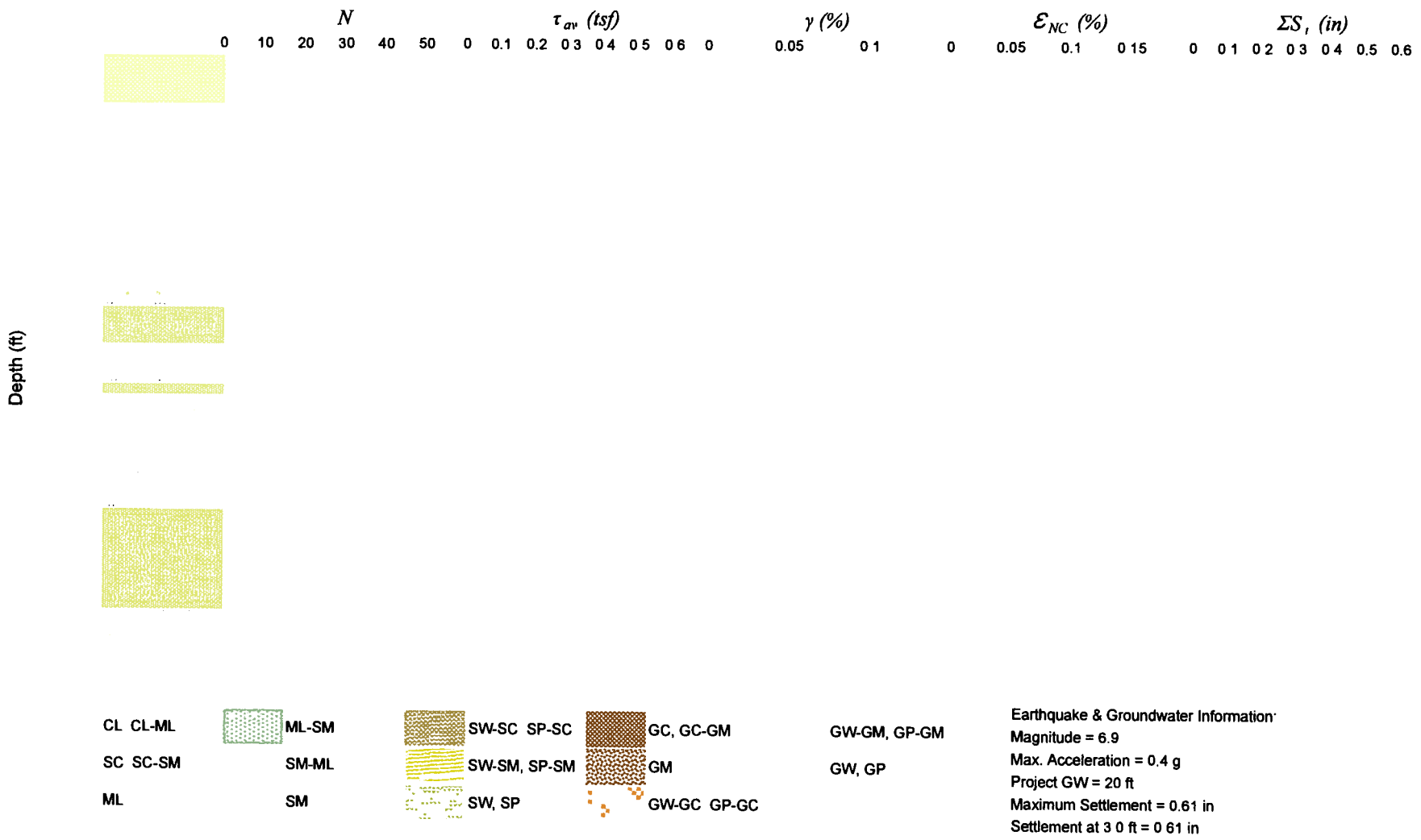

Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.61 in
Settlement at 3 0 ft = 0 61 in

C.H.J. Incorporated

Seismic Settlement of Dry Sands

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-2(Ring)	Enclosure:	D-11

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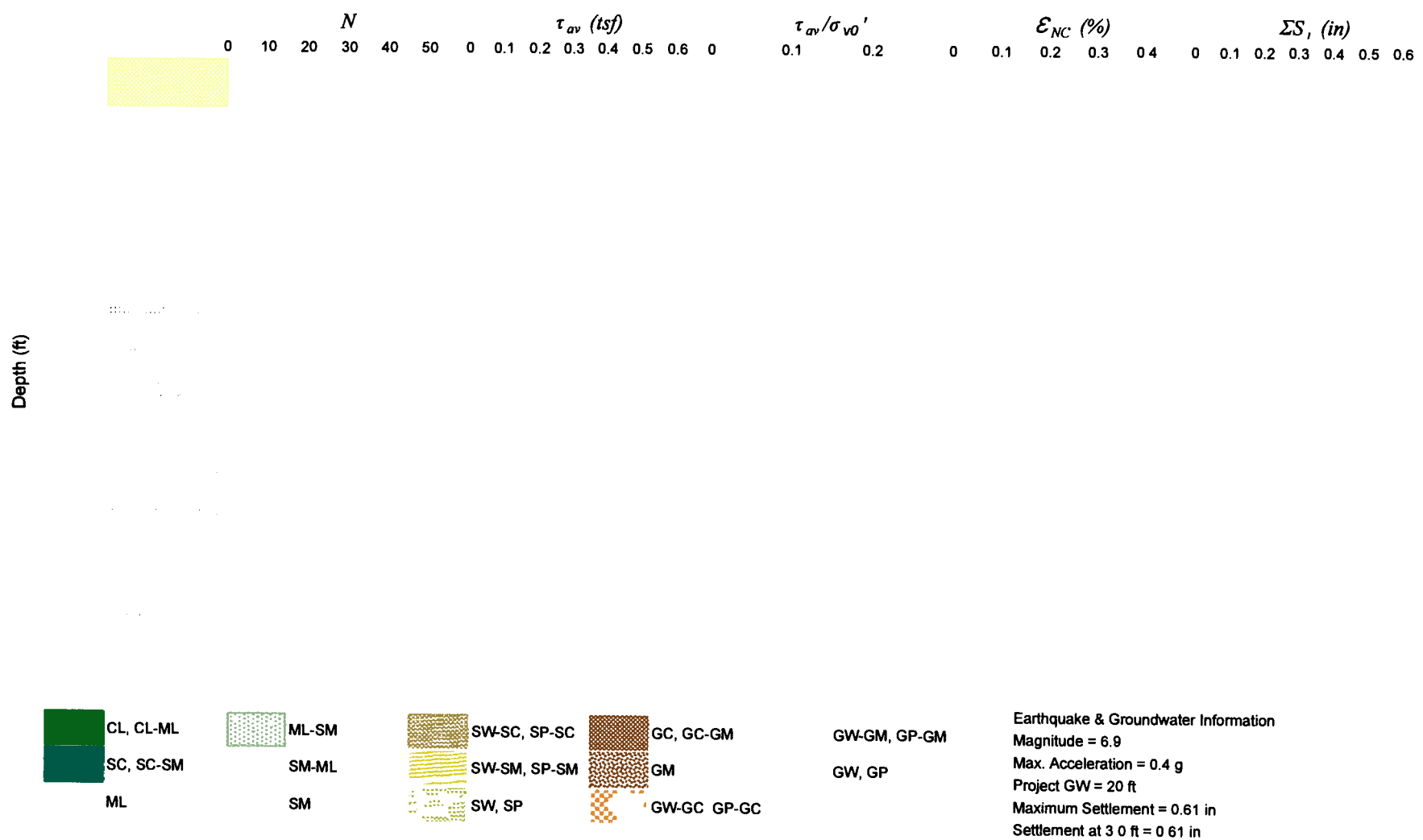

Earthquake & Groundwater Information
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.61 in
Settlement at 3 0 ft = 0 61 in

C.H.J. Incorporated

Seismic Settlement of Saturated Sands

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-2(Ring)	Enclosure:	D-12

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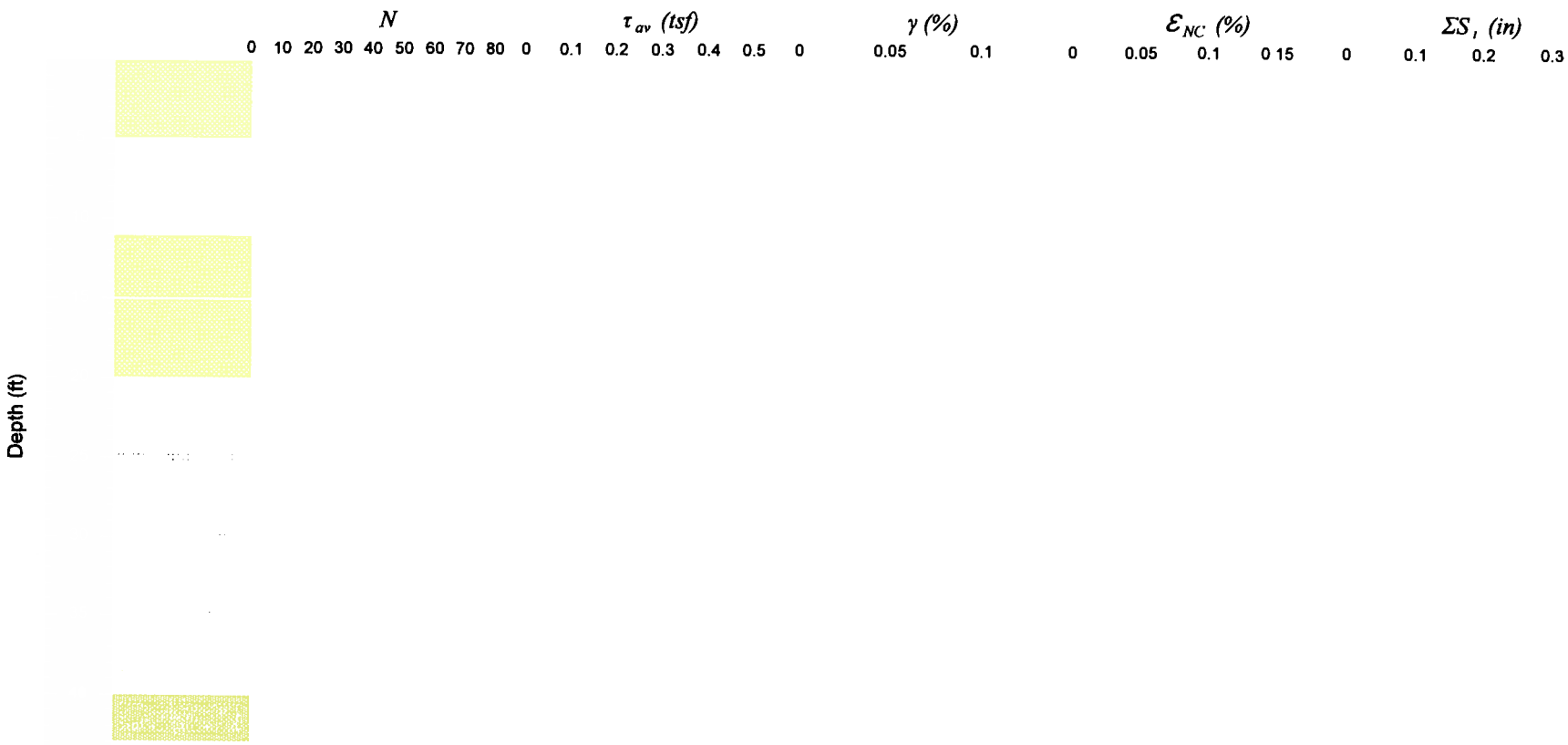

CL, CL-ML
SC, SC-SM
ML
ML-SM
SM-ML
SM
SW-SC, SP-SC
SW-SM, SP-SM
SW, SP
GC, GC-GM
GM
GW-GC, GP-GC
GW-GM, GP-GM
GW, GP

Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.38 in
Settlement at 3.0 ft = 0 38 in

C.H.J. Incorporated

Seismic Settlement of Dry Sands

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-4(SPT)	Enclosure:	D-13

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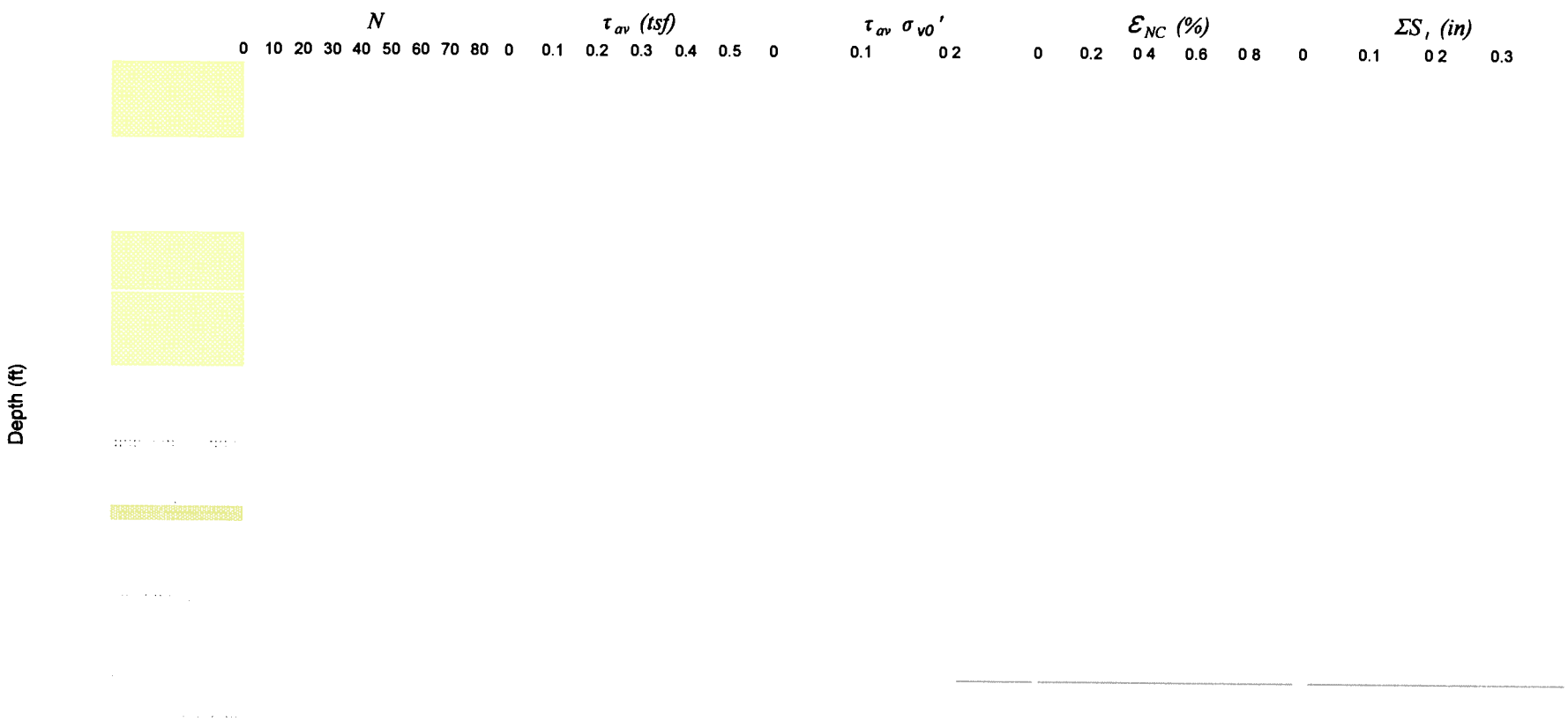

CL, CL-ML	ML-SM	SW-SC, SP-SC	GC, GC-GM	GW-GM, GP-GM
SC, SC-SM	SM-ML	SW-SM, SP-SM	GM	GW, GP
ML	SM	SW, SP	GW-GC, GP-GC	

Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.38 in
Settlement at 3.0 ft = 0.38 in

C.H.J. Incorporated

Seismic Settlement of Saturated Sands

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-4(SPT)	Enclosure:	D-14

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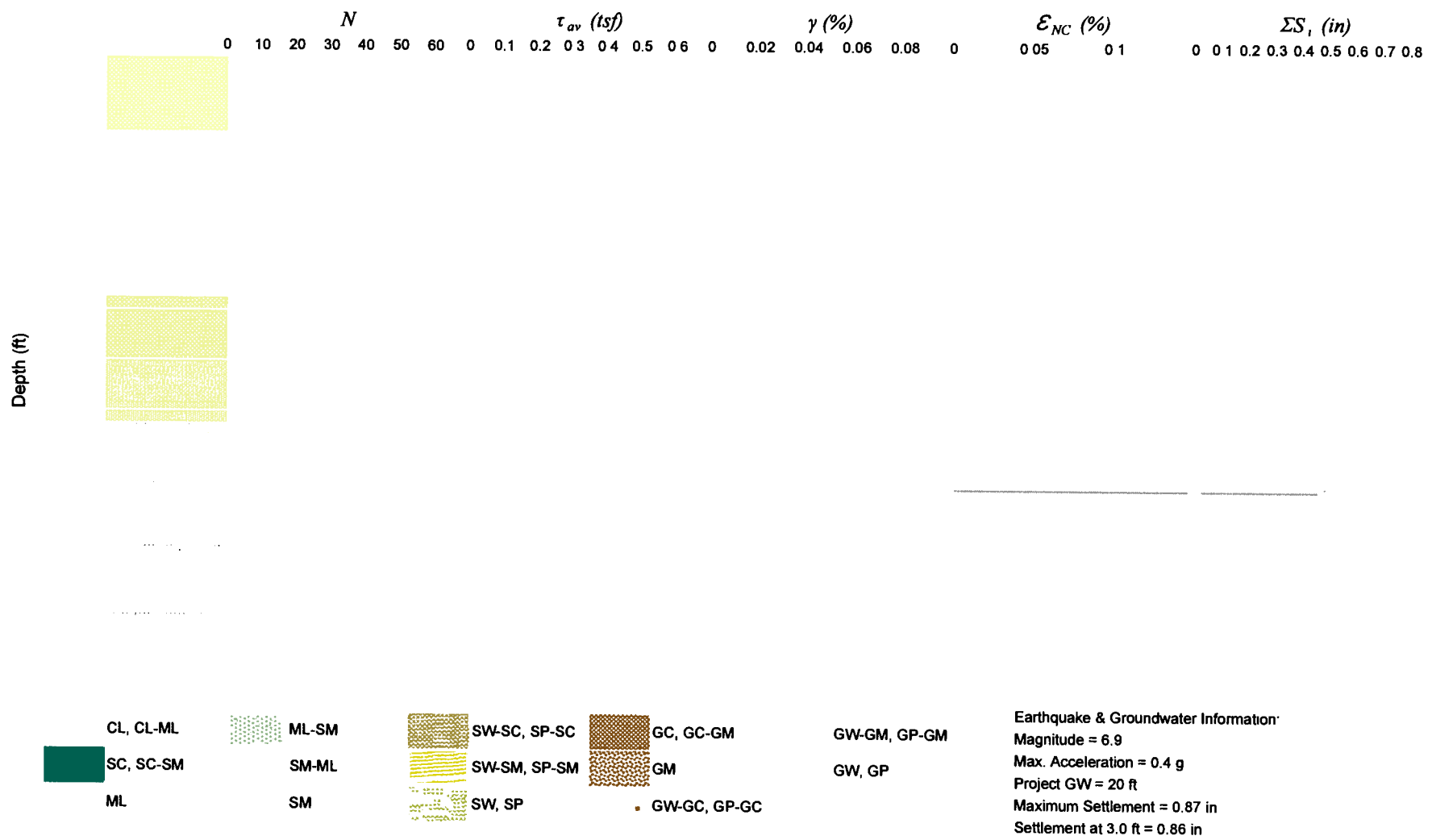

Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.87 in
Settlement at 3.0 ft = 0.86 in

C.H.J. Incorporated

Seismic Settlement of Dry Sands

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-5(SPT)	Enclosure:	D-15

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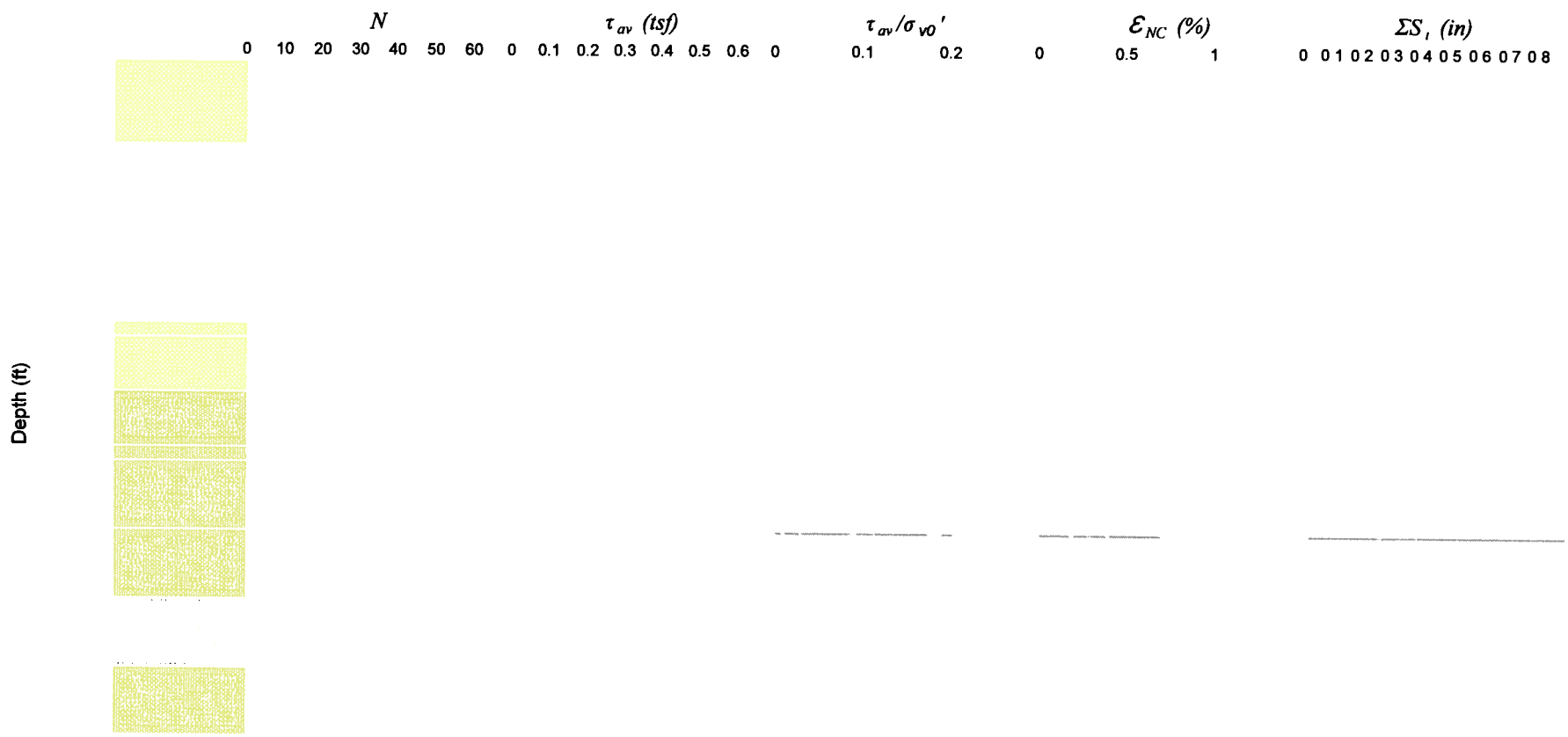

CL, CL-ML
SC, SC-SM
ML
ML-SM
SM-ML
SM
SW-SC, SP-SC
SW-SM, SP-SM
SW, SP
GC, GC-GM
GM
GW-GC, GP-GC
GW-GM, GP-GM
GW, GP

Earthquake & Groundwater Information:
Magnitude = 6.9
Max. Acceleration = 0.4 g
Project GW = 20 ft
Maximum Settlement = 0.87 in
Settlement at 3.0 ft = 0.86 in

C.H.J. Incorporated

Seismic Settlement of Saturated Sands

Project:	Proposed 5-story Parking Garage - RCH Expansion Project				
Location	4445 Magnolia Avenue, Riverside, California				
Job Number	09162-3	Boring No.	B-5(SPT)	Enclosure:	D-16

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SEISMIC SETTLEMENT (DRY SAND)

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-17	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower}=	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper}=	1.31

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Friction Angle	σ_{v0}	σ_m'	C_N	$(N_1)_{60}$	Maximum Shear Modulus	Shear Stress	Shear Strain	Volumetric Strain	Settle-ment	Cumulative Settlement
1	4.0	8.0	122.9	38.7		30.0	0.11	0.07	1.70	17.20	309.0	0.03	0.02	0.02	0.02	2.07
2	8.0	7.7	116.4	48.3		32.3	0.35	0.22	1.70	16.78	540.2	0.09	0.04	0.04	0.05	2.04
3	13.0	6.1	121.6	48.3		43.0	0.62	0.34	1.27	12.13	595.0	0.16	0.10	0.16	0.18	1.99
4	18.0	8.3	123.9	48.3		43.0	0.92	0.50	1.04	13.99	763.9	0.23	0.10	0.13	0.15	1.81
5	20.0	9.4	125.4	48.3		43.0	1.14	0.62	0.94	14.68	863.1	0.28	0.10	0.12	0.06	1.66
6	24.0	9.4	125.4	48.3	P. GW	43.0	1.33	0.72	0.87	14.30		0.33			0.89	1.60
7	28.0	16.5	136.2	12.7	P. GW	43.0	1.59	0.87	0.79	15.22		0.39			0.71	0.71
8	34.0	60.0	136.2	12.7	B. GW	43.0	1.93	1.01	0.74	47.47		0.46			0.00	0.00
9	38.0	60.0	147.3	12.7	B. GW	43.0	2.29	1.11	0.70	45.21		0.52			0.00	0.00
10	44.0	60.0	132.3	12.7	B. GW	43.0	2.63	1.22	0.67	43.34		0.58			0.00	0.00
11	48.0	60.0	138.2	20.0	B. GW	35.0	2.97	1.49	0.64	45.28		0.61			0.00	0.00
12	54.0	60.0	141.0	20.0	B. GW	35.0	3.32	1.61	0.62	43.70		0.64			0.00	0.00
13	58.0	60.0	142.7	12.7	B. GW	43.0	3.67	1.53	0.60	38.85		0.66			0.00	0.00
14	63.0	60.0	142.7	12.7	B. GW	43.0	3.99	1.63	0.58	37.71		0.68			0.00	0.00
15	68.0	60.0	142.7	12.7	B. GW	43.0	4.35	1.74	0.56	36.56		0.70			0.00	0.00
16	73.0	60.0	142.2	12.7	B. GW	43.0	4.70	1.85	0.54	35.52		0.72			0.00	0.00
17	79.0	60.0	135.4	12.7	B. GW	43.0	5.08	1.96	0.53	34.52		0.74			0.00	0.00
18	84.0	60.0	130.8	20.0	B. GW	35.0	5.45	2.34	0.51	36.86		0.77			0.00	0.00
19	87.0	60.0	137.8	20.0	B. GW	35.0	5.72	2.43	0.50	36.25		0.79			0.00	0.00
20	90.0	60.0	144.4	20.0	B. GW	35.0	5.93	2.50	0.50	35.77		0.81			0.00	0.00

Total settlement (in) 2.07

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SEISMIC SETTLEMENT (SATURATED SAND)

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-18	Boring No.:	B-1

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Pore Pressure	σ_{v0}	σ_{v0}'	C_N	$(N_1)_{60}$	τ_{av}/σ_{v0}'	Volumetric Strain	Settle-ment	Cumulative Settlement
1	4.0	8.0	122.9	38.7		0.00	0.11	0.11	1.70	17.20	0.21	0.00	0.02	2.07
2	8.0	7.7	116.4	48.3		0.00	0.35	0.35	1.70	16.78	0.21	0.00	0.05	2.04
3	13.0	6.1	121.6	48.3		0.00	0.62	0.62	1.27	12.13	0.21	0.00	0.18	1.99
4	18.0	8.3	123.9	48.3		0.00	0.92	0.92	1.04	13.99	0.20	0.00	0.15	1.81
5	20.0	9.4	125.4	48.3		0.00	1.14	1.14	0.94	14.68	0.20	0.00	0.06	1.66
6	24.0	9.4	125.4	48.3	P. GW	0.00	1.33	1.33	0.87	14.30	0.20	1.90	0.89	1.60
7	28.0	16.5	136.2	12.7	P. GW	0.00	1.59	1.59	0.79	15.22	0.20	1.68	0.71	0.71
8	34.0	60.0	136.2	12.7	B. GW	0.09	1.93	1.85	0.74	47.47	0.20	0.00	0.00	0.00
9	38.0	60.0	147.3	12.7	B. GW	0.24	2.29	2.04	0.70	45.21	0.21	0.00	0.00	0.00
10	44.0	60.0	132.3	12.7	B. GW	0.40	2.63	2.23	0.67	43.34	0.21	0.00	0.00	0.00
11	48.0	60.0	138.2	20.0	B. GW	0.55	2.97	2.41	0.64	45.28	0.21	0.00	0.00	0.00
12	54.0	60.0	141.0	20.0	B. GW	0.71	3.32	2.61	0.62	43.70	0.20	0.00	0.00	0.00
13	58.0	60.0	142.7	12.7	B. GW	0.87	3.67	2.80	0.60	38.85	0.19	0.00	0.00	0.00
14	63.0	60.0	142.7	12.7	B. GW	1.01	3.99	2.99	0.58	37.71	0.18	0.00	0.00	0.00
15	68.0	60.0	142.7	12.7	B. GW	1.16	4.35	3.19	0.56	36.56	0.18	0.00	0.00	0.00
16	73.0	60.0	142.2	12.7	B. GW	1.32	4.70	3.39	0.54	35.52	0.17	0.00	0.00	0.00
17	79.0	60.0	135.4	12.7	B. GW	1.49	5.08	3.59	0.53	34.52	0.17	0.00	0.00	0.00
18	84.0	60.0	130.8	20.0	B. GW	1.66	5.45	3.79	0.51	36.86	0.16	0.00	0.00	0.00
19	87.0	60.0	137.8	20.0	B. GW	1.79	5.72	3.93	0.50	36.25	0.16	0.00	0.00	0.00
20	90.0	60.0	144.4	20.0	B. GW	1.88	5.93	4.05	0.50	35.77	0.16	0.00	0.00	0.00

Total settlement (in) 2.07

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SEISMIC SETTLEMENT (DRY SAND)

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-19	Boring No.:	B-2(Ring)

Anticipated Magnitude	6.9	Boring GW (ft)	27	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Friction Angle	σ_{v0}	σ_m'	C_N	$(N_1)_{60}$	Maximum Shear Modulus	Shear Stress	Shear Strain	Volumetric Strain	Settle-ment	Cumulative Settlement
1	4.0	8.0	122.9	38.7		30.0	0.11	0.07	1.70	17.20	309.0	0.03	0.02	0.02	0.03	0.61
2	9.0	5.5	116.4	73.6		30.2	0.38	0.25	1.63	13.08	526.0	0.10	0.05	0.07	0.09	0.59
3	14.0	6.6	121.6	73.6		43.0	0.67	0.37	1.22	12.68	631.6	0.17	0.10	0.15	0.17	0.50
4	18.0	12.1	123.9	73.6		43.0	0.95	0.52	1.03	18.11	844.8	0.24	0.08	0.07	0.08	0.33
5	20.0	12.1	125.4	12.7		43.0	1.14	0.62	0.94	12.62	819.3	0.28	0.12	0.17	0.06	0.25
6	23.0	60.0	125.4	12.7	P. GW	43.0	1.29	0.71	0.88	53.64		0.32			0.00	0.19
7	26.0	60.0	125.4	12.7	P. GW	43.0	1.48	0.81	0.82	51.71		0.36			0.01	0.19
8	27.0	23.7	136.2	12.7	P. GW	43.0	1.61	0.88	0.79	21.00		0.39			0.02	0.18
9	33.0	23.7	147.3	12.7	B. GW	43.0	1.87	0.97	0.75	20.13		0.45			0.17	0.17
10	36.0	60.0	132.3	12.7	B. GW	43.0	2.19	1.07	0.71	46.13		0.51			0.00	0.00
11	44.0	60.0	138.2	12.7	B. GW	43.0	2.56	1.18	0.68	43.98		0.57			0.00	0.00
12	48.0	60.0	141.0	12.7	B. GW	35.0	2.98	1.48	0.65	41.90		0.61			0.00	0.00

Total settlement (in) 0.61

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SEISMIC SETTLEMENT (SATURATED SAND)

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-20	Boring No.:	B-2(Ring)

Anticipated Magnitude	6.9	Boring GW (ft)	27	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.00	MSF_{Upper} =	1.31

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Pore Pressure	σ_{v0}	σ_{v0}'	C_N	$(N_1)_{60}$	τ_{av}/σ_{v0}'	Volumetric Strain	Settle-ment	Cumulative Settlement
1	4.0	8.0	122.9	38.7		0.00	0.11	0.11	1.70	17.20	0.21	0.00	0.03	0.61
2	9.0	5.5	116.4	73.6		0.00	0.38	0.38	1.63	13.08	0.21	0.00	0.09	0.59
3	14.0	6.6	121.6	73.6		0.00	0.67	0.67	1.22	12.68	0.21	0.00	0.17	0.50
4	18.0	12.1	123.9	73.6		0.00	0.95	0.95	1.03	18.11	0.20	0.00	0.08	0.33
5	20.0	12.1	125.4	12.7		0.00	1.14	1.14	0.94	12.62	0.20	0.00	0.06	0.25
6	23.0	60.0	125.4	12.7	P. GW	0.00	1.29	1.29	0.88	53.64	0.20	0.00	0.00	0.19
7	26.0	60.0	125.4	12.7	P. GW	0.00	1.48	1.48	0.82	51.71	0.20	0.00	0.01	0.19
8	27.0	23.7	136.2	12.7	P. GW	0.00	1.61	1.61	0.79	21.00	0.20	0.13	0.02	0.18
9	33.0	23.7	147.3	12.7	B. GW	0.09	1.87	1.78	0.75	20.13	0.20	0.23	0.17	0.17
10	36.0	60.0	132.3	12.7	B. GW	0.23	2.19	1.96	0.71	46.13	0.21	0.00	0.00	0.00
11	44.0	60.0	138.2	12.7	B. GW	0.40	2.56	2.16	0.68	43.98	0.21	0.00	0.00	0.00
12	48.0	60.0	141.0	12.7	B. GW	0.59	2.98	2.39	0.65	41.90	0.21	0.00	0.00	0.00

Total settlement (in) 0.612078

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SEISMIC SETTLEMENT (DRY SAND)

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-21	Boring No.:	B-4(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	29	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Friction Angle	σ_{v0}	σ_m'	C_N	$(N_1)_{60}$	Maximum Shear Modulus	Shear Stress	Shear Strain	Volumetric Strain	Settle-ment	Cumulative Settlement
1	5.0	8.0	122.9	38.7		30.0	0.14	0.09	1.70	19.65	366.2	0.04	0.02	0.02	0.03	0.38
2	11.0	4.2	116.4	73.6		29.2	0.47	0.31	1.47	11.65	567.8	0.12	0.06	0.09	0.13	0.36
3	15.0	5.6	121.6	48.3		43.0	0.76	0.42	1.15	12.64	671.5	0.19	0.10	0.15	0.14	0.22
4	20.0	9.8	123.9	48.3		43.0	1.04	0.57	0.98	17.48	873.5	0.26	0.08	0.08	0.09	0.09
5	25.0	82.6	125.4	12.7	P. GW	43.0	1.35	0.74	0.86	86.56		0.33			0.00	0.00
6	29.0	60.0	136.2	12.7	P. GW	43.0	1.65	0.90	0.78	59.89		0.40			0.00	0.00
7	30.0	60.0	136.2	12.7	B. GW	43.0	1.82	0.99	0.74	57.22		0.44			0.00	0.00
8	35.0	60.0	147.3	12.7	B. GW	43.0	2.04	1.05	0.72	55.39		0.48			0.00	0.00
9	40.0	60.0	132.3	12.7	B. GW	43.0	2.38	1.16	0.69	52.92		0.54			0.00	0.00
10	43.0	60.0	138.2	12.7	B. GW	43.0	2.65	1.24	0.66	51.26		0.58			0.00	0.00

Total settlement (in) 0.38

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SEISMIC SETTLEMENT (SATURATED SAND)

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-22	Boring No.:	B-4(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	29	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Pore Pressure	σ_{v0}	σ_{v0}'	C_N	$(N_1)_{60}$	τ_{av}/σ_{v0}'	Volumetric Strain	Settle-ment	Cumulative Settlement
1	5.0	8.0	122.9	38.7		0.00	0.14	0.14	1.70	19.65	0.21	0.00	0.03	0.38
2	11.0	4.2	116.4	73.6		0.00	0.47	0.47	1.47	11.65	0.21	0.00	0.13	0.36
3	15.0	5.6	121.6	48.3		0.00	0.76	0.76	1.15	12.64	0.21	0.00	0.14	0.22
4	20.0	9.8	123.9	48.3		0.00	1.04	1.04	0.98	17.48	0.20	0.00	0.09	0.09
5	25.0	82.6	125.4	12.7	P. GW	0.00	1.35	1.35	0.86	86.56	0.20	0.00	0.00	0.00
6	29.0	60.0	136.2	12.7	P. GW	0.00	1.65	1.65	0.78	59.89	0.20	0.00	0.00	0.00
7	30.0	60.0	136.2	12.7	B. GW	0.01	1.82	1.81	0.74	57.22	0.20	0.00	0.00	0.00
8	35.0	60.0	147.3	12.7	B. GW	0.10	2.04	1.93	0.72	55.39	0.20	0.00	0.00	0.00
9	40.0	60.0	132.3	12.7	B. GW	0.26	2.38	2.13	0.69	52.92	0.21	0.00	0.00	0.00
10	43.0	60.0	138.2	12.7	B. GW	0.38	2.65	2.27	0.66	51.26	0.21	0.00	0.00	0.00

Total settlement (in) 0.384689

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SEISMIC SETTLEMENT (DRY SAND)

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-23	Boring No.:	B-5(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Friction Angle	σ_{v0}	σ_m'	C_N	$(N_1)_{60}$	Maximum Shear Modulus	Shear Stress	Shear Strain	Volumetric Strain	Settle-ment	Cumulative Settlement
1	6.0	8.0	122.9	38.7		30.0	0.17	0.11	1.70	19.65	404.9	0.04	0.03	0.02	0.03	0.87
2	9.0	11.2	116.4	91.1		35.3	0.44	0.27	1.51	23.24	663.3	0.11	0.04	0.03	0.03	0.84
3	14.0	7.0	121.6	91.1		43.0	0.68	0.37	1.21	14.72	667.1	0.17	0.09	0.10	0.12	0.81
4	19.0	8.4	123.9	91.1		43.0	0.99	0.54	1.01	15.81	823.1	0.25	0.09	0.10	0.11	0.69
5	20.0	11.2	123.9	48.3		43.0	1.17	0.64	0.92	18.81	950.8	0.29	0.08	0.07	0.02	0.58
6	24.0	11.2	125.4	48.3	P. GW	43.0	1.33	0.73	0.87	18.36		0.33			0.42	0.56
7	28.0	18.2	136.2	12.7	P. GW	43.0	1.59	0.87	0.79	19.56		0.39			0.12	0.14
8	29.0	18.2	136.2	12.7	B. GW	43.0	1.76	0.96	0.75	18.86		0.43			0.02	0.02
9	34.0	60.2	147.3	12.7	B. GW	43.0	1.98	1.03	0.73	56.32		0.47			0.00	0.00
10	39.0	60.0	132.3	12.7	B. GW	43.0	2.33	1.13	0.69	53.57		0.53			0.00	0.00
11	44.0	60.0	138.2	12.7	B. GW	43.0	2.67	1.23	0.67	51.42		0.58			0.00	0.00
12	49.0	60.0	141.0	12.7	B. GW	43.0	3.02	1.34	0.64	49.42		0.62			0.00	0.00

Total settlement (in) 0.87

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SEISMIC SETTLEMENT (SATURATED SAND)

Project:	Proposed 5-story Parking Garage - RCH Expansion Project	Job No.:	09162-3	Date:	4/23/2009
Location:	4445 Magnolia Avenue, Riverside, California	Enclosure:	D-24	Boring No.:	B-5(SPT)

Anticipated Magnitude	6.9	Boring GW (ft)	28	C_N=	Liao & Whiteman (1986) method			L_R=	3 ft	MSF_{Lower} =	1.23
Maximum Acceleration	0.4	Project GW (ft)	20	C_E=	1.00	C_B=	1.00	C_S=	1.20	MSF_{Upper} =	1.31

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Pore Pressure	σ_{v0}	σ_{v0}'	C_N	$(N_1)_{60}$	τ_{av}/σ_{v0}'	Volumetric Strain	Settle-ment	Cumulative Settlement
1	6.0	8.0	122.9	38.7		0.00	0.17	0.17	1.70	19.65	0.21	0.00	0.03	0.87
2	9.0	11.2	116.4	91.1		0.00	0.44	0.44	1.51	23.24	0.21	0.00	0.03	0.84
3	14.0	7.0	121.6	91.1		0.00	0.68	0.68	1.21	14.72	0.21	0.00	0.12	0.81
4	19.0	8.4	123.9	91.1		0.00	0.99	0.99	1.01	15.81	0.20	0.00	0.11	0.69
5	20.0	11.2	123.9	48.3		0.00	1.17	1.17	0.92	18.81	0.20	0.00	0.02	0.58
6	24.0	11.2	125.4	48.3	P. GW	0.00	1.33	1.33	0.87	18.36	0.20	1.03	0.42	0.56
7	28.0	18.2	136.2	12.7	P. GW	0.00	1.59	1.59	0.79	19.56	0.20	0.24	0.12	0.14
8	29.0	18.2	136.2	12.7	B. GW	0.01	1.76	1.76	0.75	18.86	0.20	0.36	0.02	0.02
9	34.0	60.2	147.3	12.7	B. GW	0.10	1.98	1.88	0.73	56.32	0.20	0.00	0.00	0.00
10	39.0	60.0	132.3	12.7	B. GW	0.26	2.33	2.07	0.69	53.57	0.21	0.00	0.00	0.00
11	44.0	60.0	138.2	12.7	B. GW	0.41	2.67	2.26	0.67	51.42	0.21	0.00	0.00	0.00
12	49.0	60.0	141.0	12.7	B. GW	0.57	3.02	2.45	0.64	49.42	0.21	0.00	0.00	0.00

Total settlement (in) 0.87

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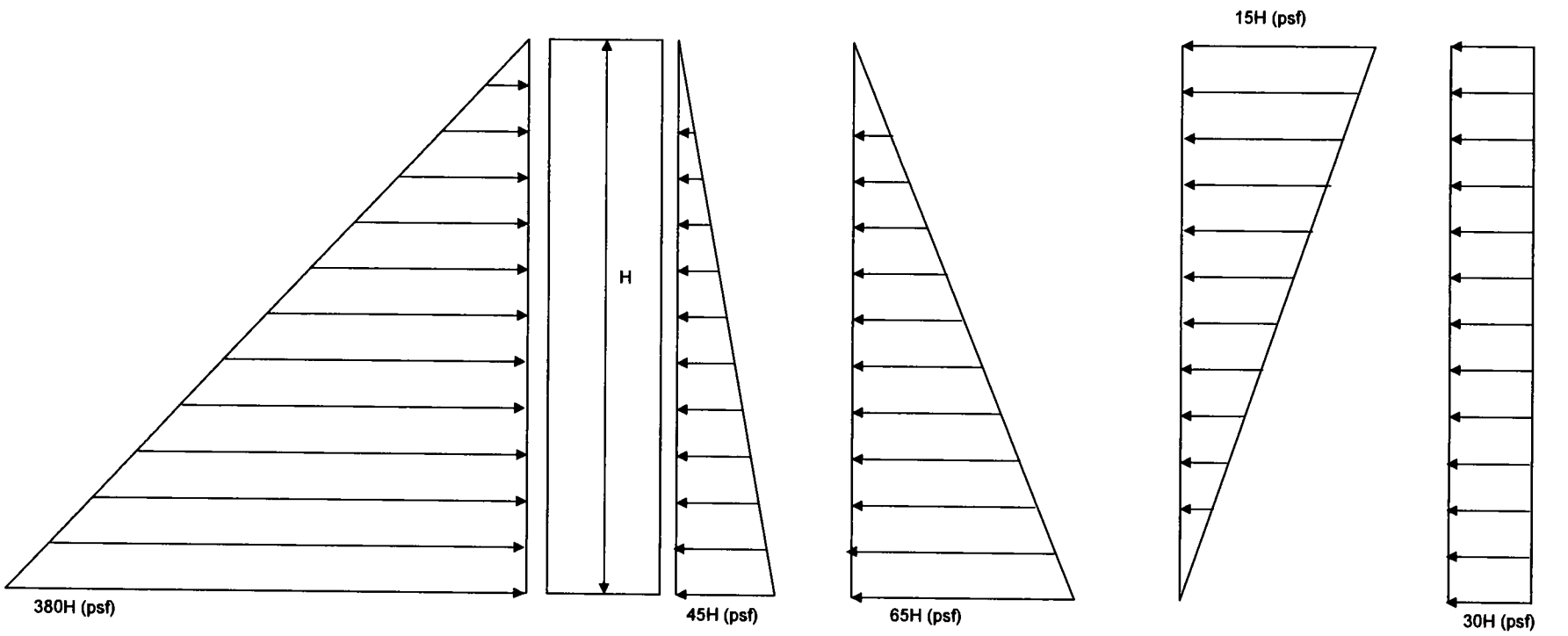

(a) Passive Earth

(b) Active Earth

(c) At-rest Earth Pressure

(d) Active Seismic Earth Pressure

(e) Apparent Earth Pressure (Sand)

Ultimate Passive Resistance: 380H (psf)

Allowable Passive Resistance: 190H (psf)

Factor of Safety: 2.0

Ultimate Base Friction: 0.40

Allowable Base Friction: 0.27

Factor of Safety: 1.5

* not scaled

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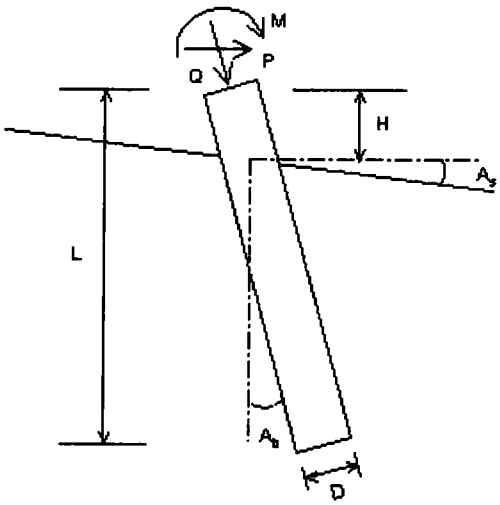
Typical Earth Pressure Distributions			
Project:	Proposed 5-story Parking Garage - RCH Expansion Project		
Location	4445 Magnolia Avenue, Riverside, California		
Job Number	09162-3	Enclosure	D-25

APPENDIX "E"

PILE CALCULATIONS

VERTICAL ANALYSIS

Enclosure "E-1"
Job No. 09162-3



Drilled Pile (dia <=24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Cyclic
Number of Cycles: 15
Vertical Load, Q= 200.0 -kp
Shear Load, P= 0.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 50.0 -ft
Top Height, H= -3 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0.0

Fixed Head Condition

Soil Data:

Pile Data:

0.0	24	452.4	75.4	16286.0	3000	0.471
50.0						

Vertical capacity:
Weight above Ground= 0.00 Total Weight= 17.06-kp *Soil Weight is not included
Side Resistance (Down)= 181.830-kp Side Resistance (Up)= 147.363-kp
Tip Resistance (Down)= 286.400-kp Tip Resistance (Up)= 0.000-kp
Total Ultimate Capacity (Down)= 468.230-kp Total Ultimate Capacity (Up)= 164.420-kp
Total Allowable Capacity (Down)= 205.475-kp Total Allowable Capacity (Up)= 66.178-kp
OK! Qallow > Q

Settlement Calculation:
At Q= 200.00-kp Settlement= 0.21666-in
At Xallow= 1.00-in Qallow= 368.97879-kp

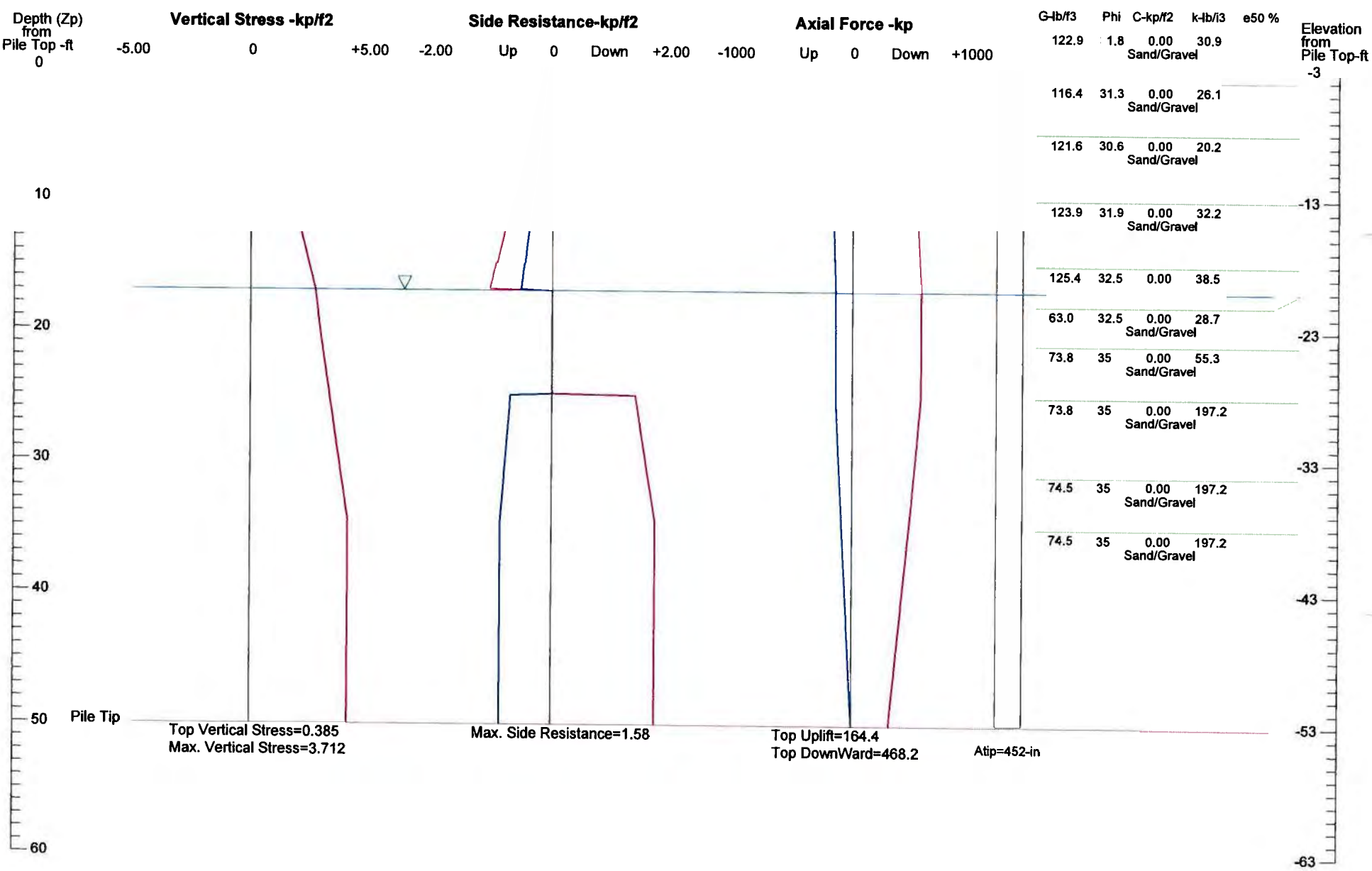
Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.

Enclosure "E-2"
Job No. 09162-3

SOIL STRESS, SIDE RESISTANCE, & AXIAL FORCE vs DEPTH

Based on Ultimate Load Condition

Pile below Ground (NTS)



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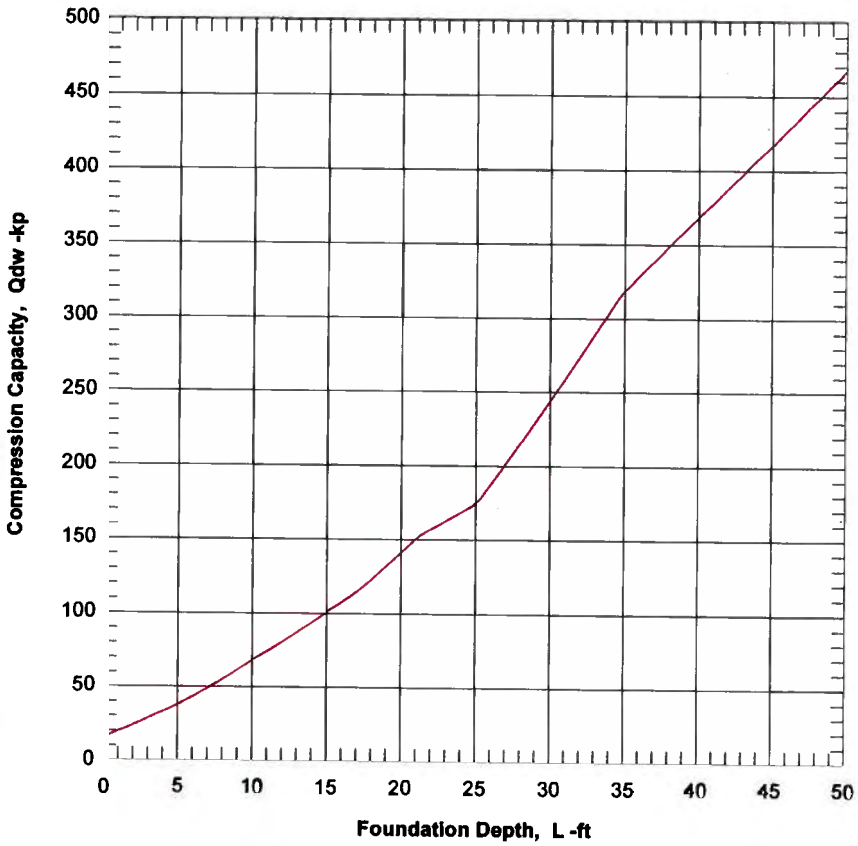
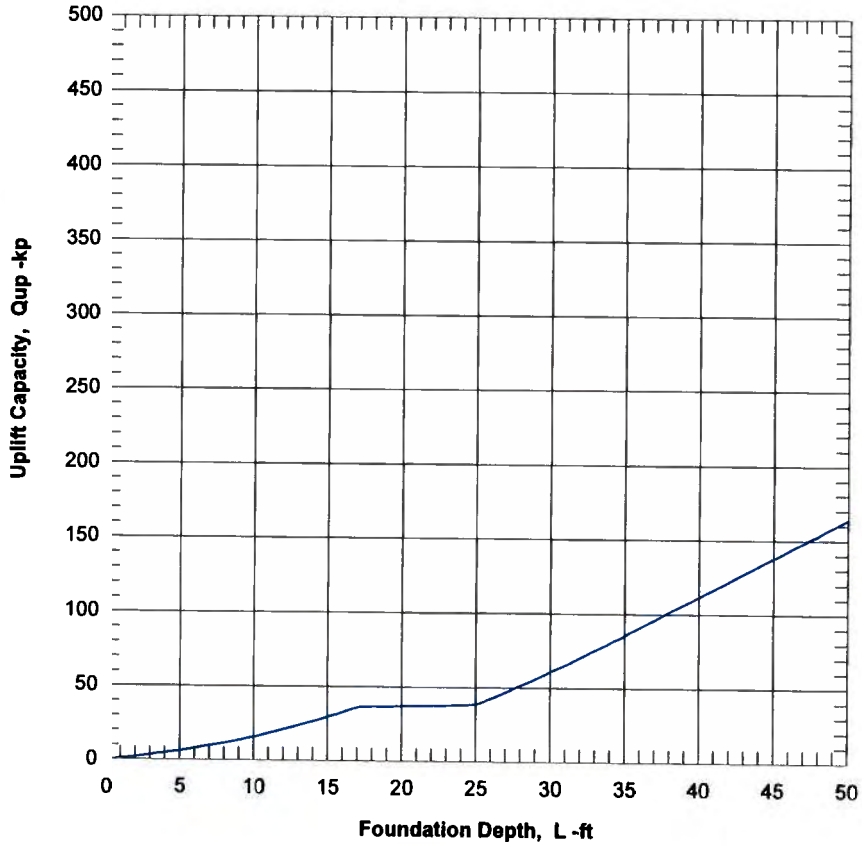
RCH - 5-Story Parking Garage
24 in CIDH Pile (B-1)

Enclosure "E-3"
Job No. 09162-3

ULTI ATE CAPACITY vs FOUNDATION DEPTH





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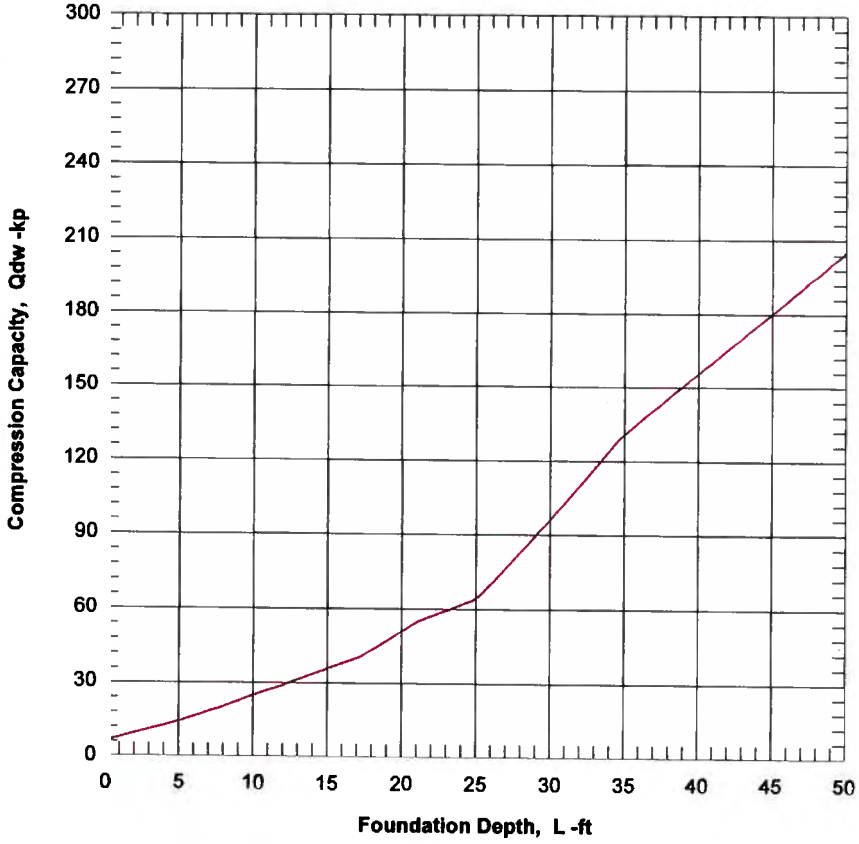
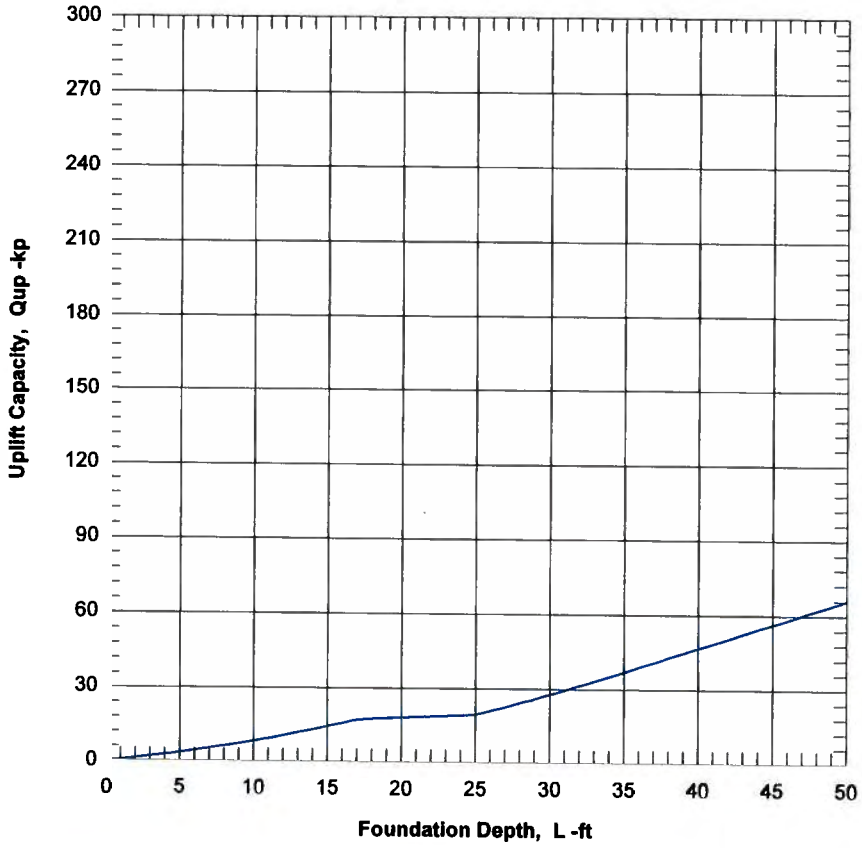
RCH - 5-Story Parking Garage
24 in CIDH Pile (B-1)

Enclosure "E-4"
Job No. 09162-3

ALLOWABLE CAPACITY vs FOUNDATION DEPTH





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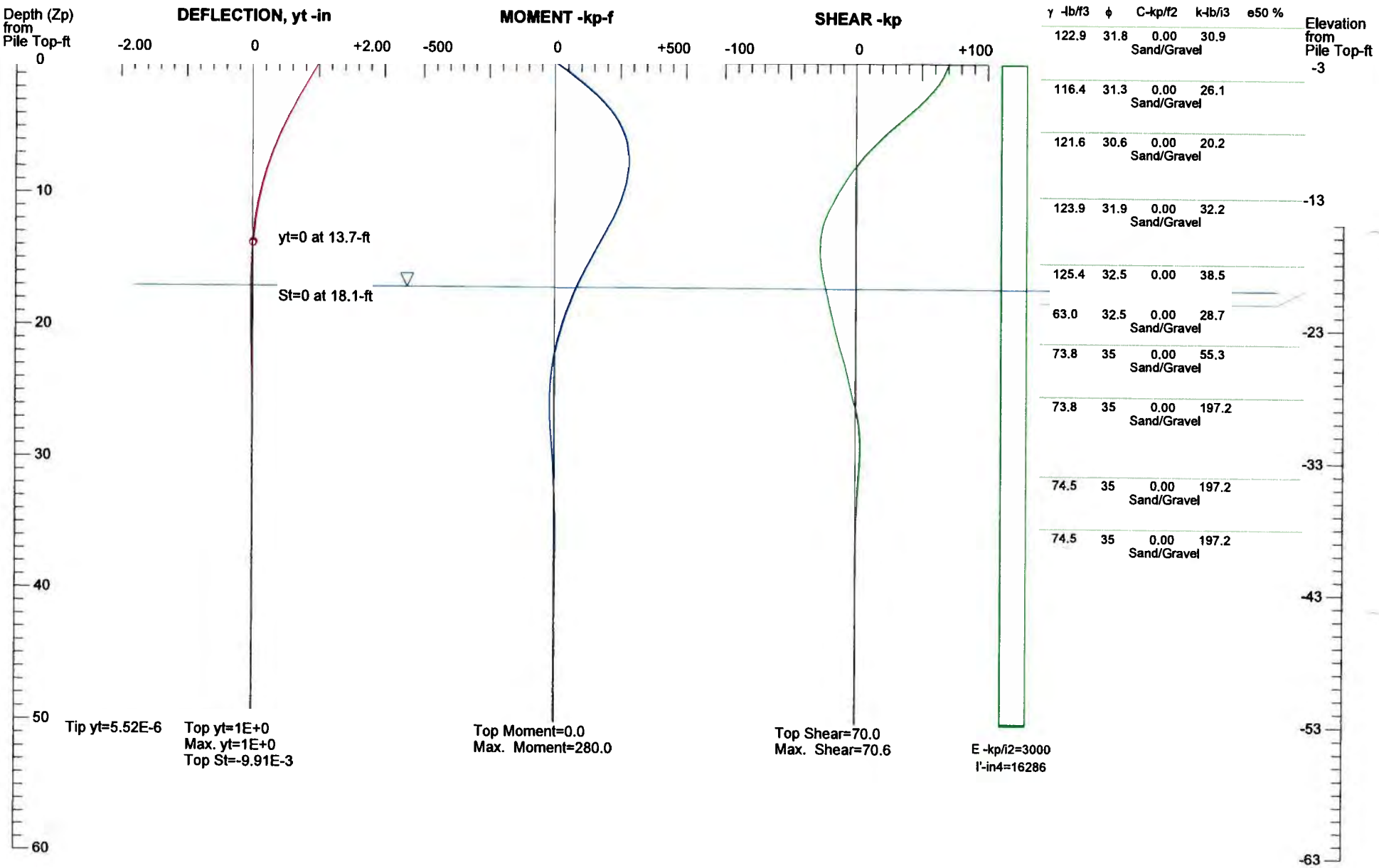
RCH - 5-Story Parking Garage
24 in CIDH Pile (B-1)

Enclosure "E-5"
Job No. 09162-3

PILE DEFLECTION & FORCE vs DEPTH

Pile below Ground (NTS

Single Pile, Khead=2, Kbc=1



γ -lb/f3	ϕ	C-kp/f2	k-lb/i3	e50 %	
122.9	31.8	0.00	30.9		Sand/Gravel
116.4	31.3	0.00	26.1		Sand/Gravel
121.6	30.6	0.00	20.2		Sand/Gravel
123.9	31.9	0.00	32.2		Sand/Gravel
125.4	32.5	0.00	38.5		
63.0	32.5	0.00	28.7		Sand/Gravel
73.8	35	0.00	55.3		Sand/Gravel
73.8	35	0.00	197.2		Sand/Gravel
74.5	35	0.00	197.2		Sand/Gravel
74.5	35	0.00	197.2		Sand/Gravel

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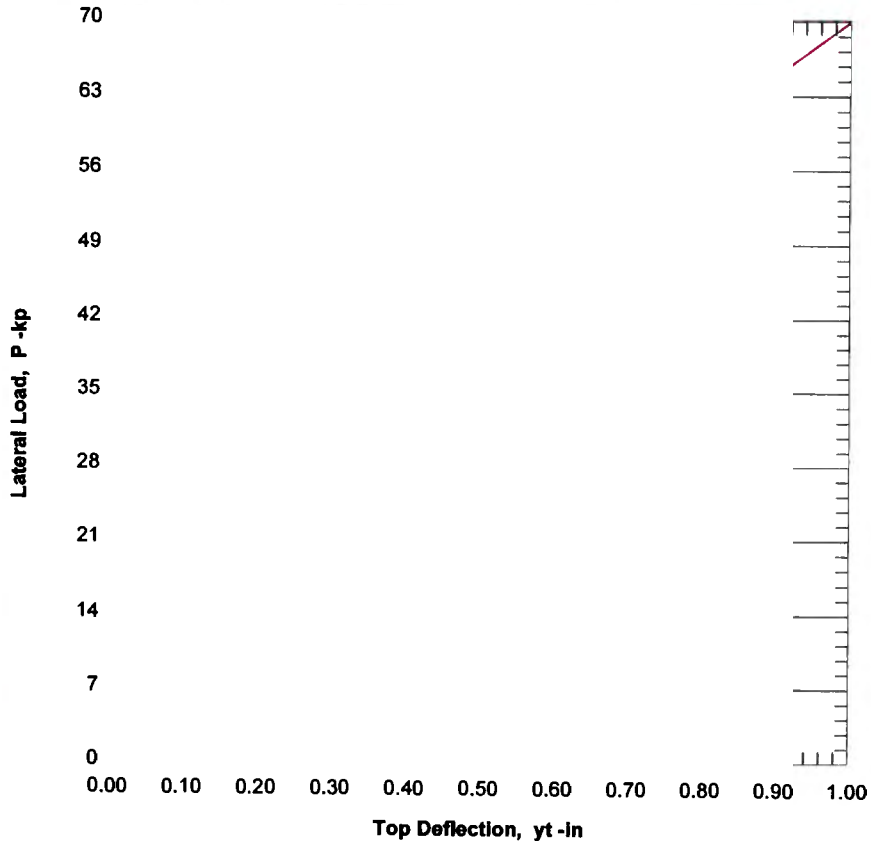
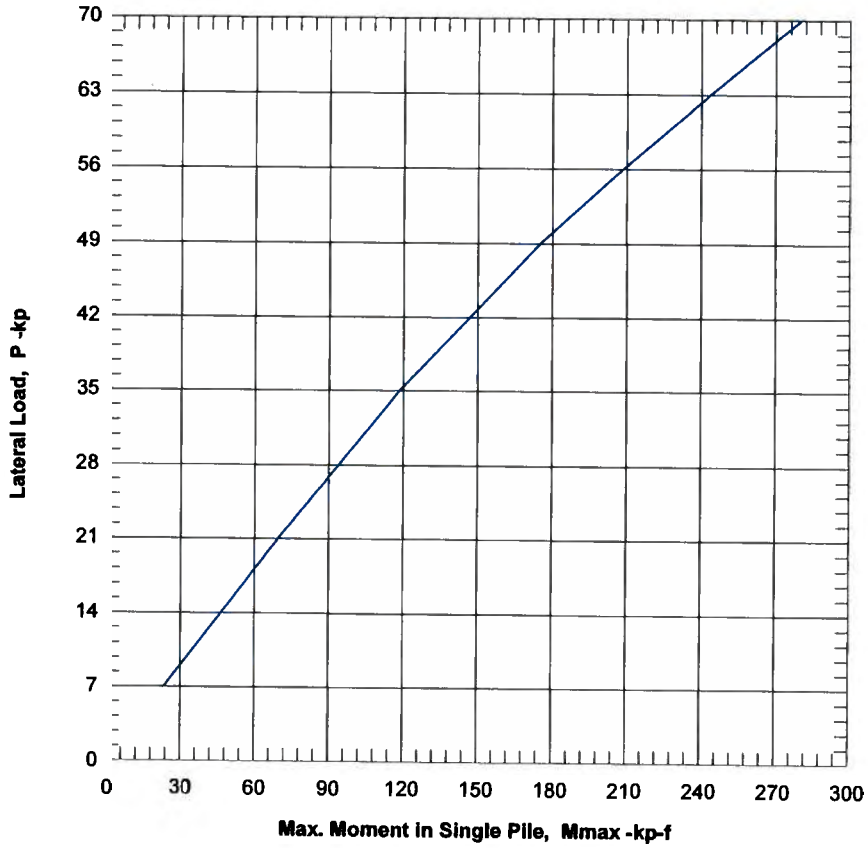
RCH - 5-Story Parking Garage
24 in CIDH Pile (B-1), Free Head

Enclosure "E-6"
Job No. 09162-3

LATERAL LOAD vs DEFLECTION & MAX. O ENT





C.H.J. Incorporated

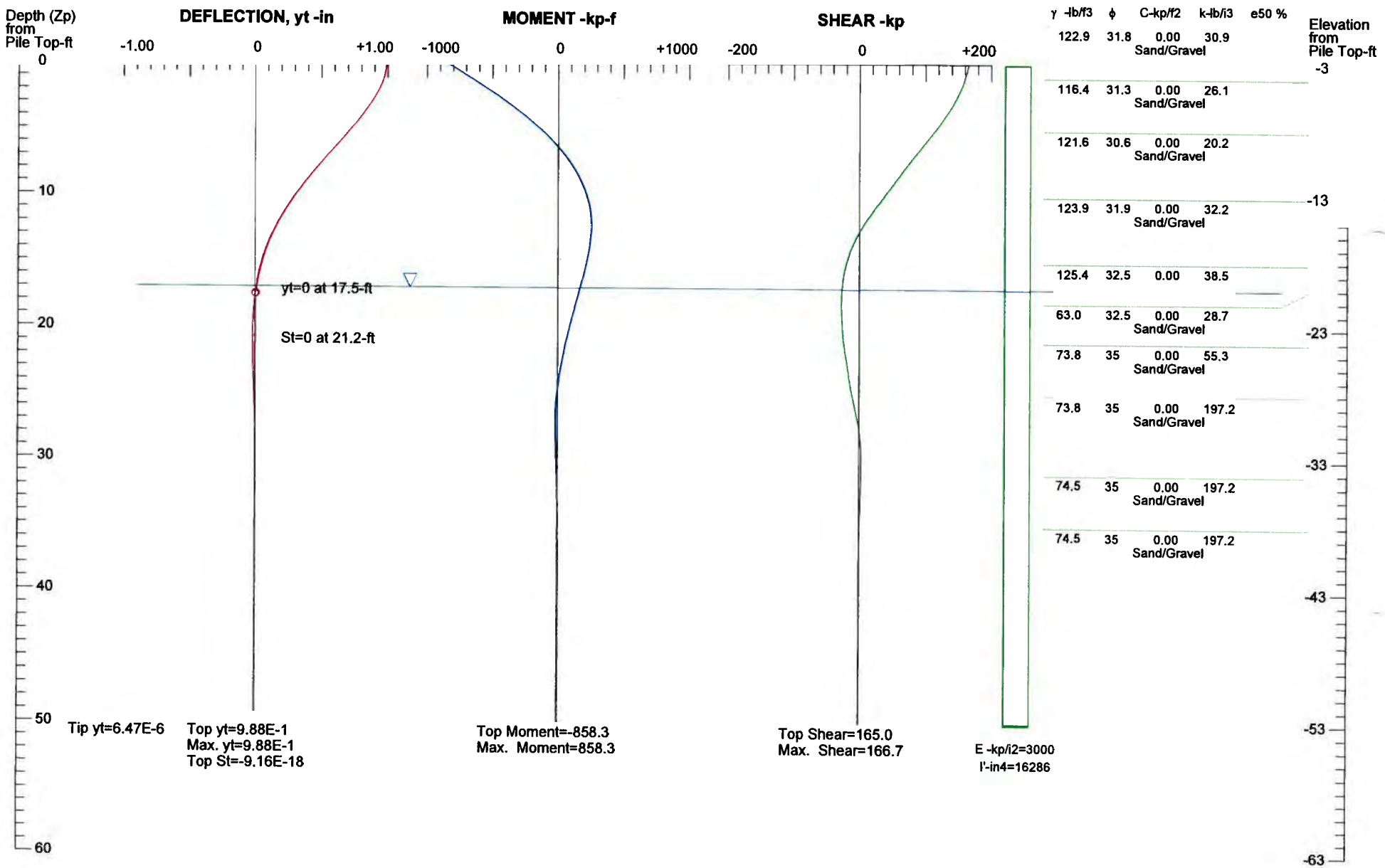
RCH - 5-Story Parking Garage
24 in CIDH Pile (B-1), Free Head

Enclosure "E-7"
Job No. 09162-3

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=5, Kbc=2

Pile below Ground (NTS)



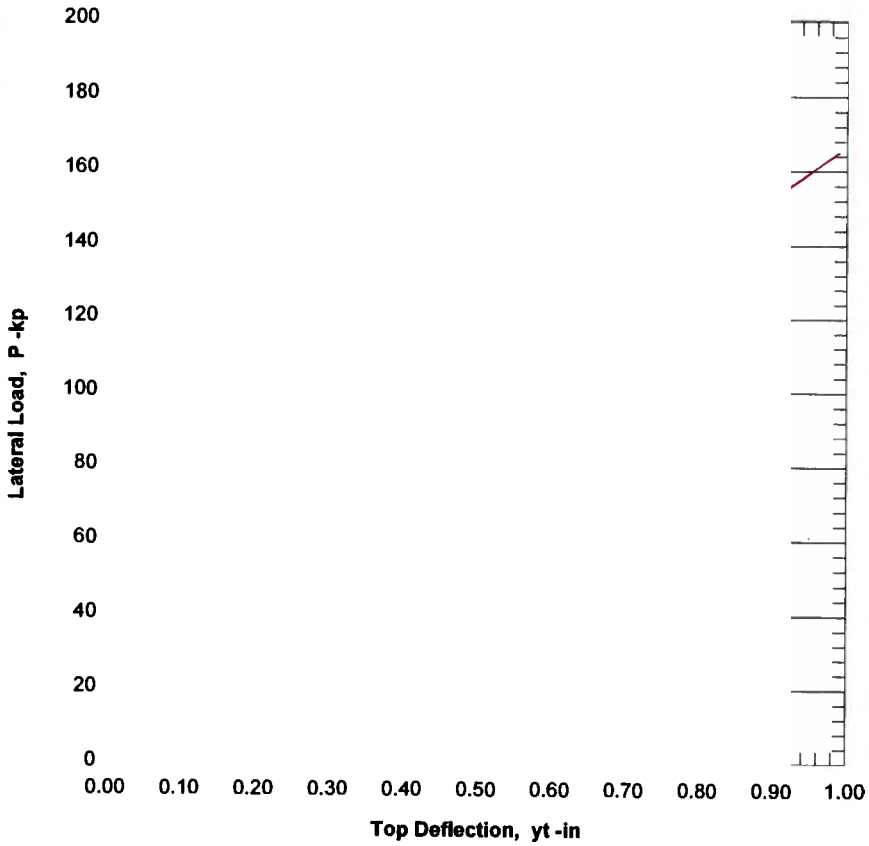
γ -lb/f3	ϕ	C-kp/f2	k-lb/i3	e50 %	
122.9	31.8	0.00	30.9		Sand/Gravel
116.4	31.3	0.00	26.1		Sand/Gravel
121.6	30.6	0.00	20.2		Sand/Gravel
123.9	31.9	0.00	32.2		Sand/Gravel
125.4	32.5	0.00	38.5		
63.0	32.5	0.00	28.7		Sand/Gravel
73.8	35	0.00	55.3		Sand/Gravel
73.8	35	0.00	197.2		Sand/Gravel
74.5	35	0.00	197.2		Sand/Gravel
74.5	35	0.00	197.2		Sand/Gravel

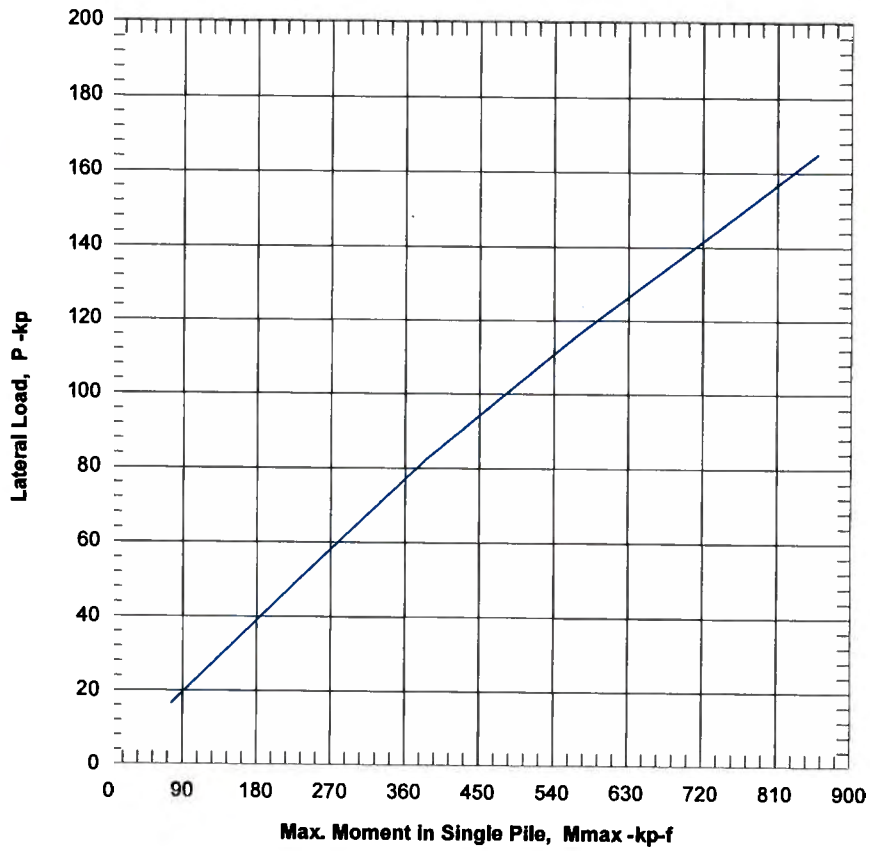
C.H.J. Incorporated

RCH - 5-Story Parking Garage
24 in CIDH Pile (B-1), Fixed Head

Enclosure "E-8"
Job No. 09162-3

LATERAL LOAD vs DEFLECTION & MAX. MOMENT





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RCH - 5-Story Parking Garage
24 in CIDH Pile (B-1), Fixed Head

24in CIDH (B-1) 09162-3

Downward and Uplift Capacity vs Pile Length

The results are for single section pile. Multiple sections may not be correct!
****

Length -ft	Qtip -kp	Qside -kp	Q_dw -kp	Qd_alw -kp	Weight -kp	Qsid* -kp	Q_up -kp	Qu_alw -kp
0.00	15.43	0.00	15.4	6.17	0.00	0.00	0.00	0.00
0.51	18.09	-0.48	17.6	7.00	0.23	0.24	0.47	0.31
1.01	20.75	-1.04	19.7	7.78	0.47	0.52	0.99	0.65
1.52	23.59	-1.66	21.9	8.61	0.71	0.83	1.54	0.99
2.02	26.52	-2.34	24.2	9.44	0.95	1.17	2.12	1.34
2.53	29.53	-3.11	26.4	10.26	1.19	1.55	2.74	1.71
3.03	32.63	-3.93	28.7	11.09	1.42	1.96	3.39	2.08
3.54	35.82	-4.82	31.0	11.92	1.66	2.41	4.07	2.46
4.04	39.11	-5.80	33.3	12.75	1.90	2.90	4.80	2.87
4.55	42.50	-6.83	35.7	13.58	2.14	3.42	5.55	3.28
5.05	46.01	-7.94	38.1	14.43	2.38	3.97	6.35	3.70
5.56	49.89	-9.09	40.8	15.41	2.62	4.55	7.16	4.13
6.06	53.91	-10.30	43.6	16.41	2.85	5.15	8.00	4.56
6.57	58.06	-11.60	46.5	17.43	3.09	5.80	8.89	5.02
7.07	62.37	-12.96	49.4	18.47	3.33	6.48	9.81	5.49
7.58	66.82	-14.39	52.4	19.53	3.56	7.20	10.76	5.96
8.08	71.45	-15.89	55.6	20.63	3.80	7.94	11.74	6.44
8.59	76.24	-17.46	58.8	21.76	4.04	8.73	12.77	6.95
9.09	81.19	-19.12	62.1	22.92	4.28	9.56	13.84	7.47
9.60	86.33	-20.84	65.5	24.11	4.52	10.42	14.94	7.99
10.10	91.56	-22.63	68.9	25.31	4.75	11.31	16.06	8.52
10.61	96.55	-24.57	72.0	26.33	4.98	12.29	17.27	9.08
11.11	101.69	-26.60	75.1	27.37	5.22	13.30	18.52	9.65
11.62	106.94	-28.71	78.2	28.42	5.46	14.36	19.82	10.25
12.12	112.35	-30.91	81.4	29.49	5.71	15.45	21.16	10.86
12.63	117.88	-33.15	84.7	30.58	5.94	16.57	22.52	11.47
13.13	123.57	-35.48	88.1	31.69	6.18	17.74	23.92	12.09
13.64				32.82	6.42	18.94	25.37	12.74
14.14				33.99	6.65	20.18	26.83	13.38
14.65				35.16	6.90	21.46	28.36	14.05
15.15			[illegible]	36.32	7.13	22.78	29.91	14.72
15.66			[illegible]	37.37	7.36	24.16	31.52	15.41
16.16			[illegible]	38.44	7.60	25.58	33.18	16.12
16.67			[illegible]	39.52	7.83	27.04	34.88	16.85
17.17			[illegible]	40.81	8.04	28.06	36.10	17.39
17.68			[illegible]	42.55	8.18	28.07	36.26	17.54
18.18			[illegible]	44.30	8.33	28.14	36.48	17.71
18.69			[illegible]	46.14	8.46	28.13	36.59	17.83
19.19				48.01	8.60	28.07	36.67	17.96
19.70			[illegible]	49.90	8.75	28.08	36.83	18.11
20.20	199.9		[illegible]	51.81	8.88	28.16	37.04	18.27
20.71	204.6		[illegible]	53.84	9.01	28.03	37.04	18.35
21.21	208.9		[illegible]	55.42	9.17	28.16	37.33	18.56
21.72	211.6		[illegible]	56.61	9.30	28.07	37.36	18.65
22.22	214.6		[illegible]	57.77	9.43	28.08	37.51	18.79
22.73	217.4		[illegible]	58.93	9.56	28.03	37.60	18.91
23.23	220.42	-56.22	[illegible]	60.06	9.70	28.11	37.81	19.07
23.74	223.36	-56.32	[illegible]	61.18	9.87	28.16	38.03	19.25
24.24	226.22	-56.30	[illegible]	62.34	10.00	28.15	38.15	19.39
24.75	229.01	-56.19	[illegible]	63.51	10.14	28.10	38.24	19.51
25.25	232.01	-54.53	[illegible]	65.54	10.28	29.08	39.36	19.98
25.76	234.95	-50.33	[illegible]	68.81	10.40	31.21	41.61	20.80
26.26	237.82	-46.40		71.93	10.54	33.19	43.73	21.60
26.77	240.64	-42.21	198.4	75.15	10.68	35.22	45.90	22.42
27.27	243.41	-37.75	205.7	78.49	10.82	37.29	48.11	23.25
27.78	246.39	-33.43	213.0	81.84	10.97	39.63	50.60	24.18
28.28	249.37	-29.34	220.0	85.08	11.12	41.76	52.88	25.04
28.79	251.97	-24.65	227.3	88.46	11.22	43.72	54.94	25.79
29.29	255.14	-20.49	234.7	91.81	11.38	46.17	57.55	26.77
29.80	257.92	-16.30	241.6	95.02	11.52	48.20	59.72	27.59

30.30	260.71	-11.37	249.3	98.60	11.67	50.53	62.20	28.51
30.81	263.73	-7.07	256.7	101.96	11.79	52.84	64.63	29.41
31.31	266.39	-2.28	264.1	105.42	11.93	54.98	66.92	30.26
31.82	269.44	2.36	271.8	108.95	12.09	57.42	69.51	31.23
32.32	272.30	7.23	279.5	112.53	12.21	59.86	72.06	32.16
32.83	275.22	12.24	287.5	116.21	12.36	62.38	74.73	33.15
33.33	278.11	16.92	295.0	119.70	12.48	64.63	77.10	34.02
33.84	280.92	21.68	302.6	123.21	12.63	66.94	79.57	34.94
34.34	284.11	26.36	310.5	126.82	12.75	69.55	82.30	35.94
34.85	285.94	31.46	317.4	130.11	12.90	71.92	84.82	36.88
35.35	285.92	36.41	322.3	132.57	13.03	74.58	87.61	37.89
35.86	285.88	41.74	327.6	135.22	13.18	77.01	90.19	38.85
36.36	286.07	46.93	333.0	137.89	13.30	79.70	93.00	39.87
36.87	286.21	51.51	337.7	140.24	13.46	82.14	95.60	40.84
37.37	286.25	56.27	342.5	142.63	13.59	84.55	98.14	41.77
37.88	286.16	61.68	347.8	145.30	13.75	87.32	101.07	42.85
38.38	286.43	66.63	353.1	147.89	13.87	89.76	103.63	43.79
38.89	286.17	71.55	357.7	150.24	14.03	92.22	106.25	44.77
39.39	286.27	76.67	362.9	152.84	14.15	94.67	108.82	45.70
39.90	285.75	81.70	367.5	155.15	14.31	97.10	111.41	46.67
40.40	285.76	87.00	372.8	157.81	14.42	99.58	114.00	47.62
40.91	286.04	91.34	377.4	160.09	14.56	102.07	116.62	48.58
41.41	285.75	96.67	382.4	162.64	14.71	104.54	119.25	49.56
41.92	286.41	101.25	387.7	165.19	14.84	107.11	121.95	50.55
42.42	285.99	106.70	392.7	167.75	15.00	109.59	124.59	51.53
42.93	285.97	111.28	397.2	170.02	15.13	112.08	127.21	52.49
43.43	285.92	117.07	403.0	172.90	15.24	114.59	129.83	53.44
43.94	286.18	121.77	407.9	175.36	15.42	117.16	132.58	54.47
44.44	285.97	126.49	412.5	177.63	15.55	119.67	135.22	55.44
44.95	286.16	131.44	417.6	180.18	15.67	122.22	137.89	56.41
45.45	285.82	136.54	422.4	182.60	15.83	124.38	140.21	57.29
45.96	285.89	141.59	427.5	185.15	15.95	126.93	142.88	58.26
46.46	285.88	146.63	432.5	187.66	16.08	129.47	145.55	59.24
46.97	285.84	151.66	437.5	190.17	16.25	132.08	148.33	60.28
47.47	286.24	157.00	443.2	193.00	16.38	134.72	151.10	61.28
47.98	286.12	161.42	447.5	195.16	16.50	136.88	153.38	62.13
48.48	285.83	166.58	452.4	197.62	16.62	139.39	156.01	63.09
48.99	286.11	172.00	458.1	200.44	16.79	142.10	158.90	64.16
49.49	286.19	176.18	462.4	202.57	16.94	144.69	161.63	65.17
50.00	286.40	181.83	468.2	205.48	17.06	147.36	164.42	66.18

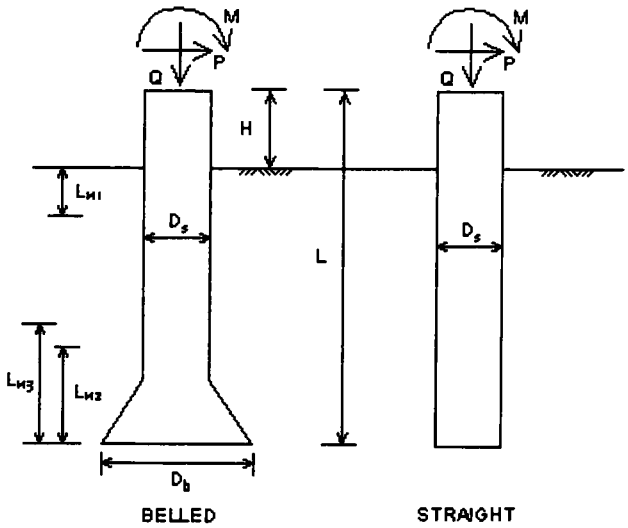
FACTOR OF SAFETY:

FSside	FStip	FSup	FSweight
2.0	2.5	3.0	1.0

Note: Data can be selected, copied and pasted to Excel to create graphics
Length - Pile length, distance from pile top to tip (not from ground surface)
Qtip - Ultimate pile tip resistance
Qside - Ultimate pile side resistance
Q_dw - Ultimate pile downward resistance
Qd_alw - Allowable pile downward resistance
Weight - Weight of pile shaft
Qsid* - Ultimate pile side uplift resistance
Q_up - Ultimate pile uplift resistance
Qu_alw - Allowable pile uplift resistance

VERTICAL ANALYSIS

Enclosure "E-11"
Job No. 09162-3



Drilled Shaft (dia >24 in. or 61 cm)

Loads:
Load Factor for Vertical Loads= 1.0
Load Factor for Lateral Loads= 1.0
Loads Supported by Pile Cap= 0 %
Shear Condition: Cyclic
Number of Cycles: 15
Vertical Load, Q= 200.0 -kp
Shear Load, P= 0.0 -kp
Slope Restain St= 0.00 -in/-in

Profile:
Pile Length, L= 43.0 -ft
Top Height, H= -3 -ft
Slope Angle, As= 0
Batter Angle, Ab= 0.0

Fixed Head Condition
Exclusion Zone, Ln1=Ln2=Ln3=0.

Soil Data:

Pile Data:

0.0	36	1017.9	113.1	82448.0	3000	1.060
43.0						

Vertical capacity:
Weight above Ground= 0.00 Total Weight= 34.07-kp *Soil Weight is not included
Side Resistance (Down)= 156.730-kp Side Resistance (Up)= 173.657-kp
Tip Resistance (Down)= 750.722-kp Tip Resistance (Up)= 0.000-kp
Total Ultimate Capacity (Down)= 907.452-kp Total Ultimate Capacity (Up)= 207.725-kp
Total Allowable Capacity (Down)= 378.654-kp Total Allowable Capacity (Up)= 91.954-kp
OK! Qallow > Q

Settlement Calculation:
At Q= 200.00-kp Settlement= 0.19243-in
At Xallow= 1.00-in Qallow= 549.03741-kp

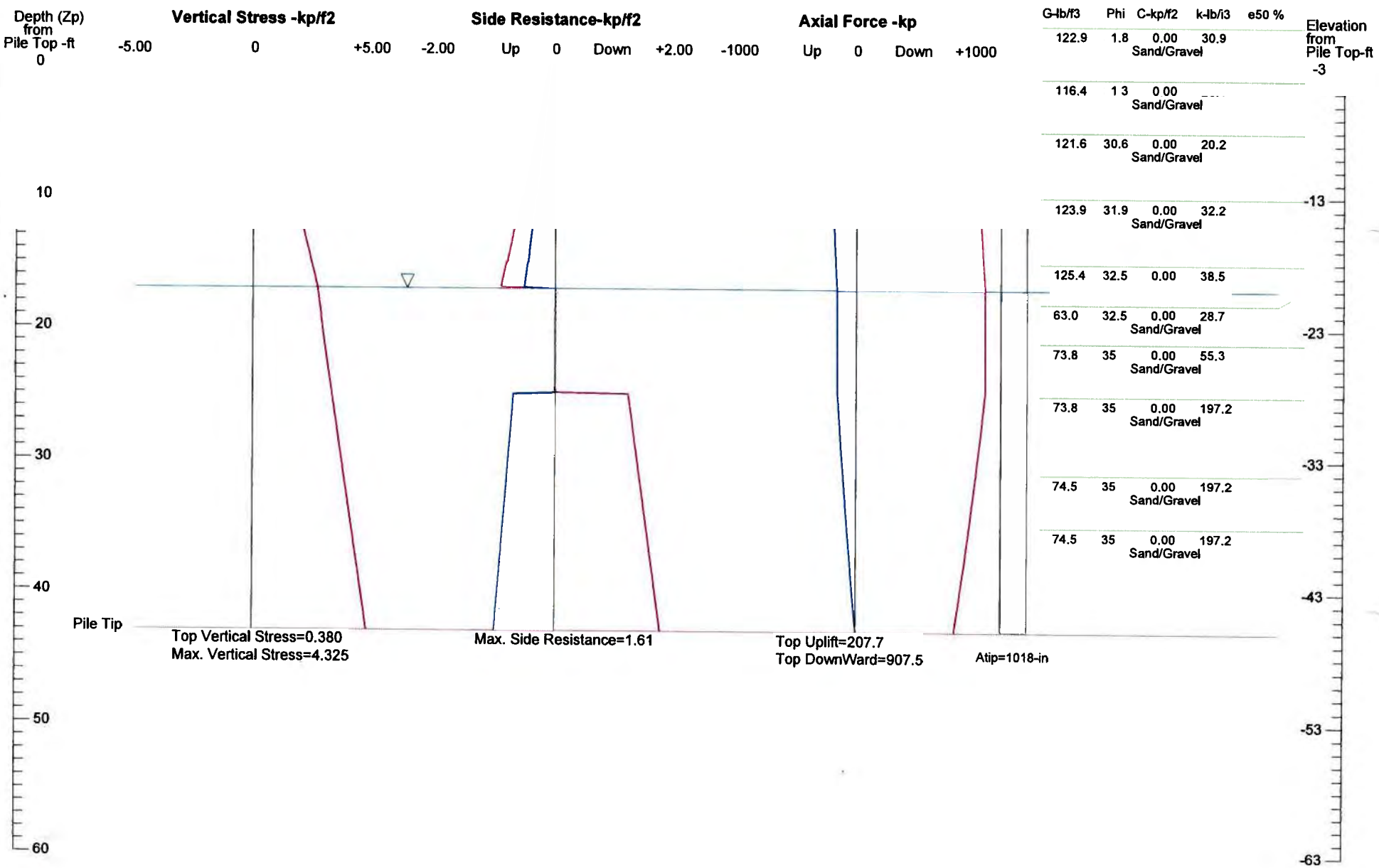
Note: If the program cannot find a result or the result exceeds the upper limit. The result will be displayed as 99999.

Enclosure "E-12"
Job No. 09162-3

SOIL STRESS, SIDE RESISTANCE, & AXIAL FORCE vs DEPTH

Based on Ultimate Load Condition

Pile below Ground (NTS)

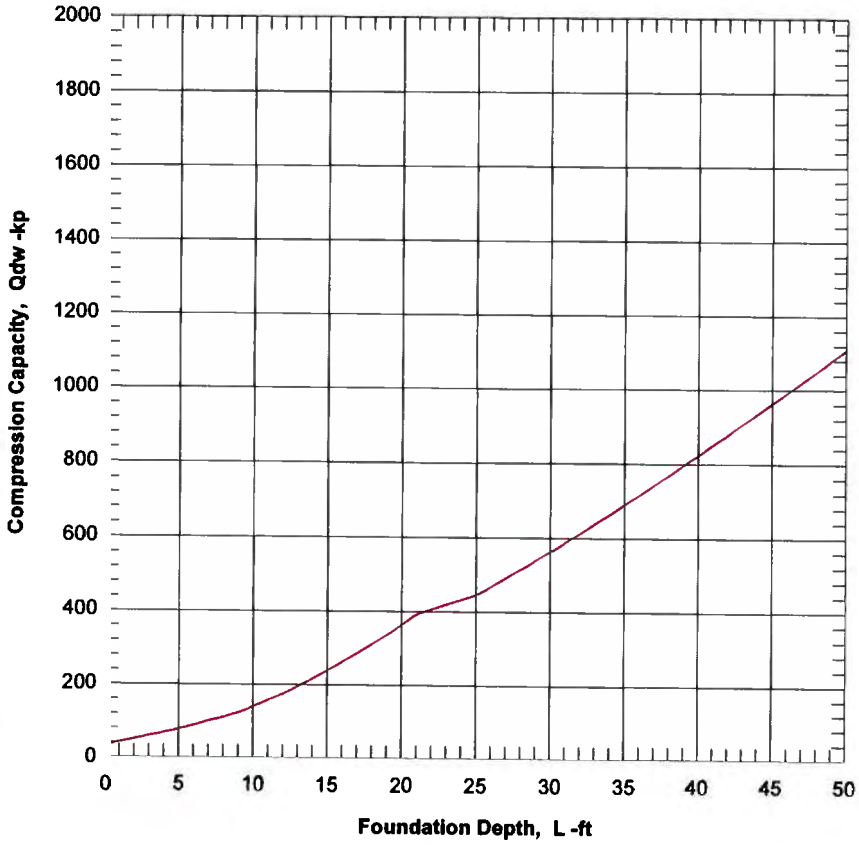


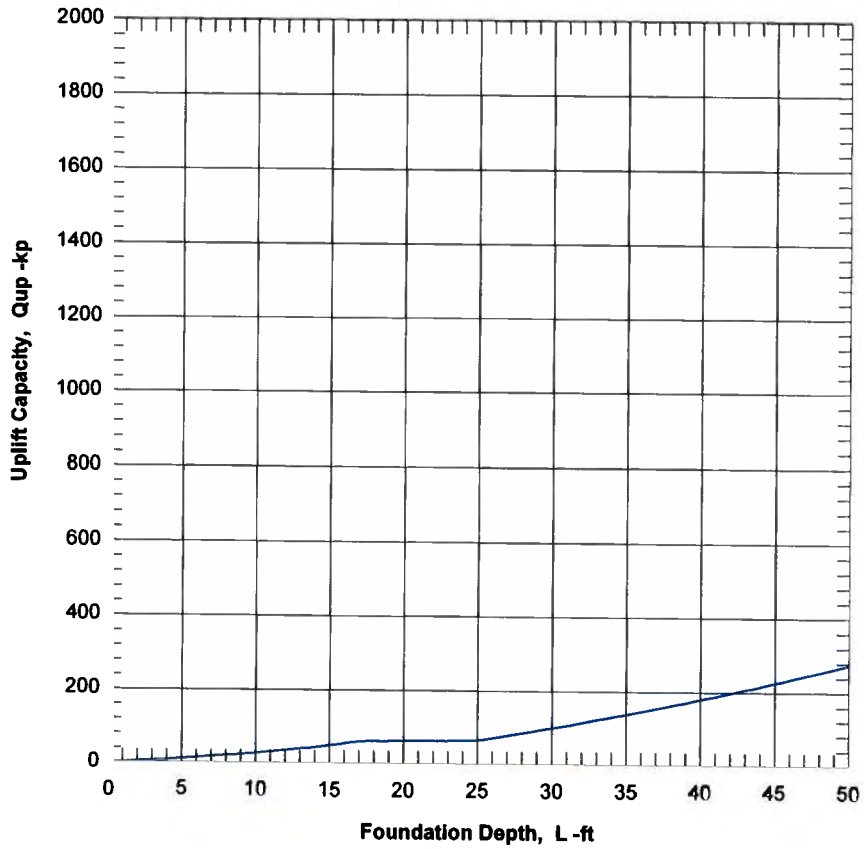
C.H.J. Incorporated

RCH - 5-Story Parking Garage
36 in CIDH Pile (B-1)

Enclosure "E-13"
Job No. 09162-3

ULTIMATE CAPACITY vs FOUNDATION DEPTH



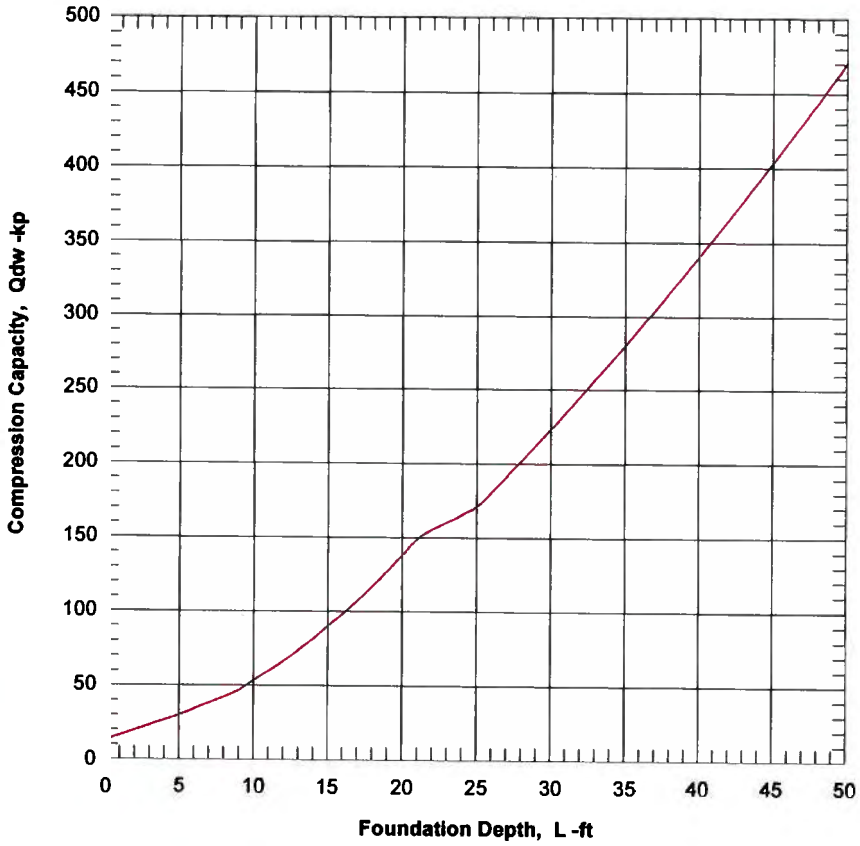


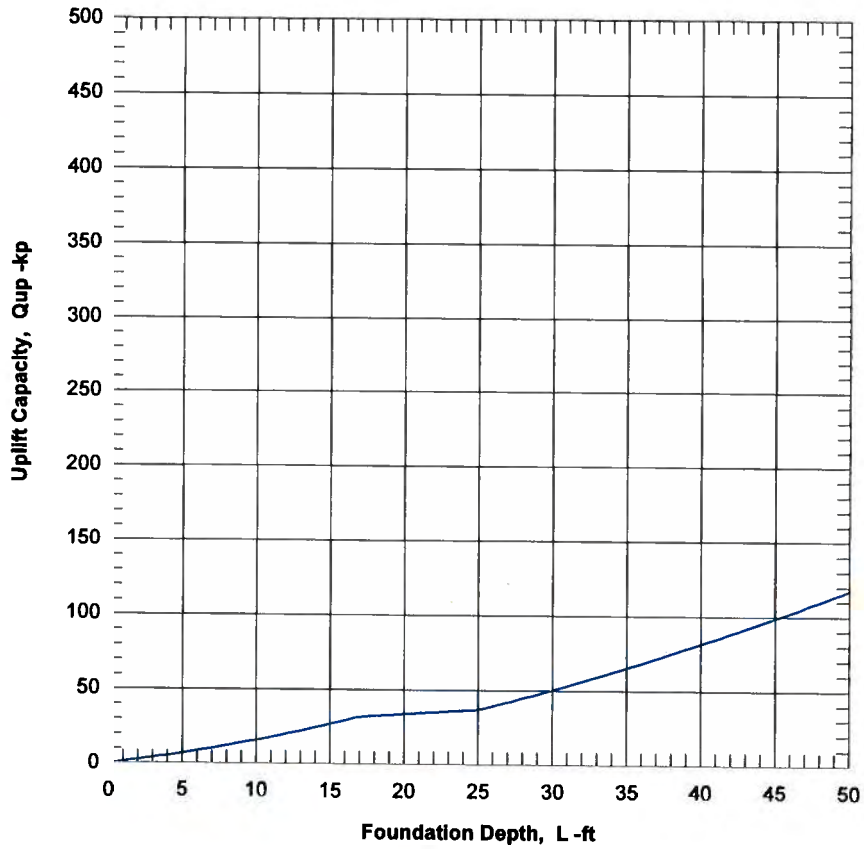
C.H.J. Incorporated

RCH - 5-Story Parking Garage
36 in CIDH Pile (B-1)

Enclosure "E-14"
Job No. 09162-3

ALLOWABLE CAPACITY vs FOUNDATION DEPTH





C.H.J. Incorporated

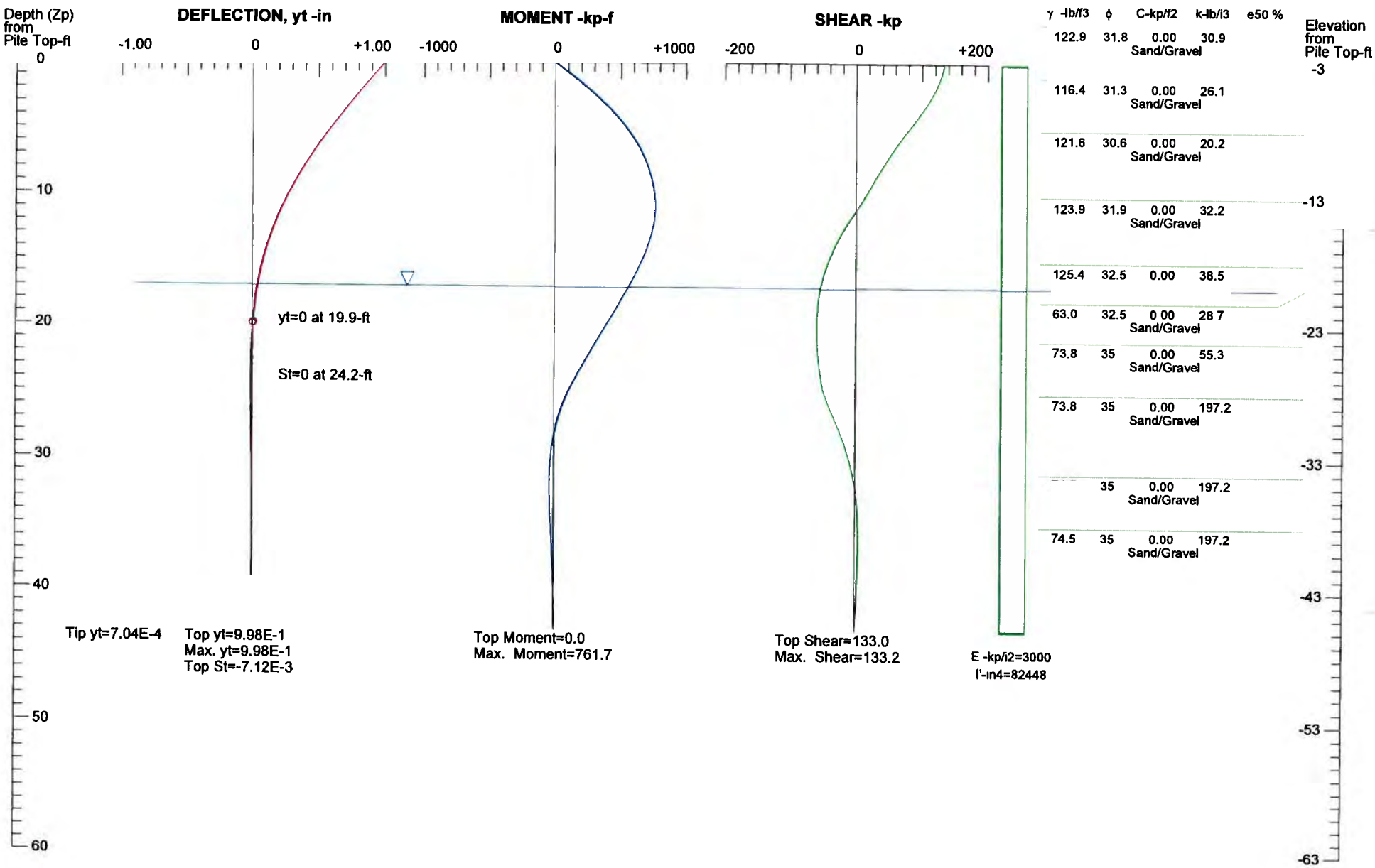
RCH - 5-Story Parking Garage
36 in CIDH Pile (B-1)

Enclosure "E-15"
Job No. 09162-3

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=2, Kbc=1

Pile below Ground NTS)



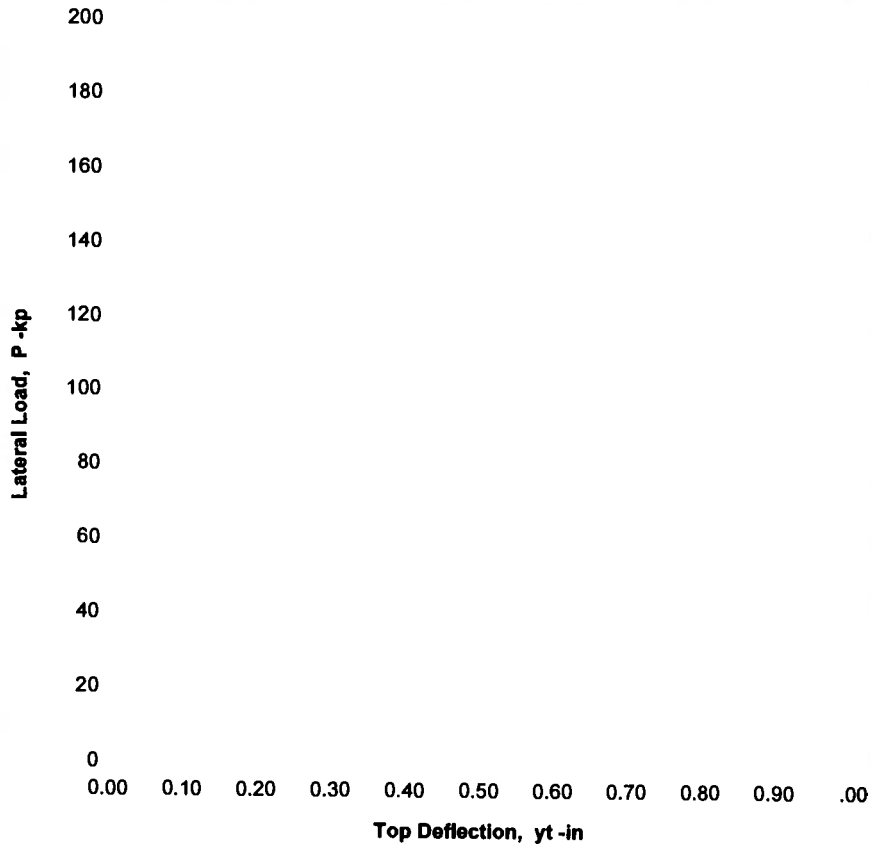
γ -lb/f3	ϕ	C-kp/f2	k-lb/i3	e50 %	
122.9	31.8	0.00	30.9		Sand/Gravel
116.4	31.3	0.00	26.1		Sand/Gravel
121.6	30.6	0.00	20.2		Sand/Gravel
123.9	31.9	0.00	32.2		Sand/Gravel
125.4	32.5	0.00	38.5		
63.0	32.5	0 00	28 7		Sand/Gravel
73.8	35	0.00	55.3		Sand/Gravel
73.8	35	0.00	197.2		Sand/Gravel
	35	0.00	197.2		Sand/Gravel
74.5	35	0.00	197.2		Sand/Gravel

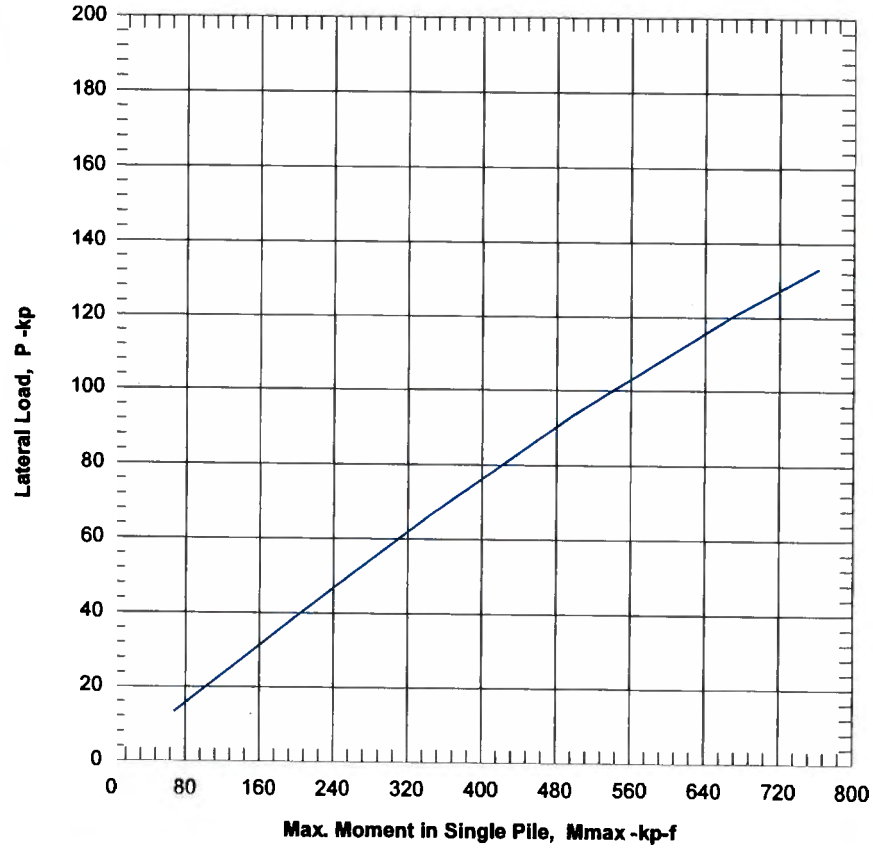
C.H.J. Incorporated

RCH - 5-Story Parking Garage
36 in CIDH Pile (B-1), Free Head

Enclosure "E-16"
Job No. 09162-3

LATERAL LOAD vs DEFLECTION & MAX. MOMENT





C.H.J. Incorporated

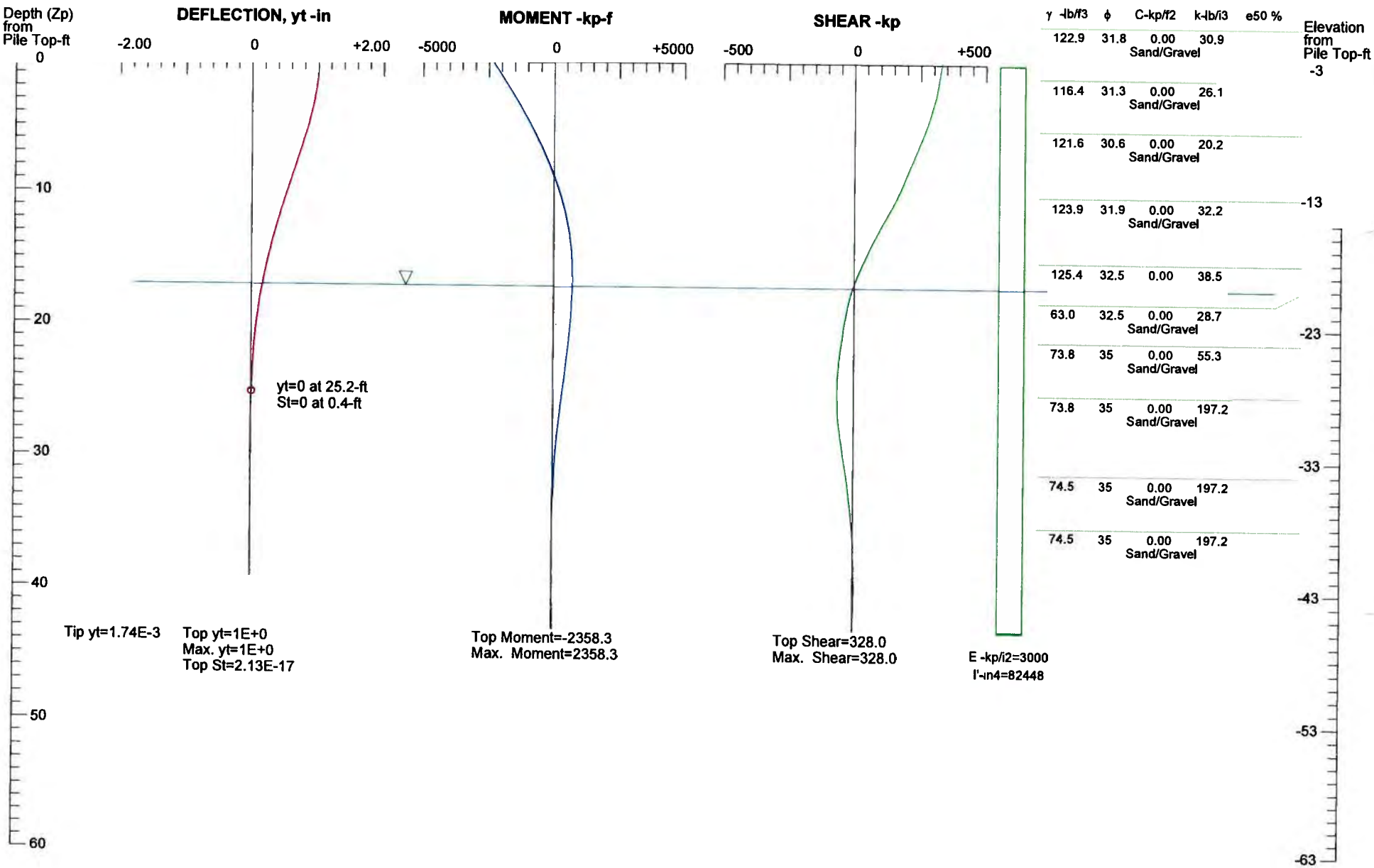
RCH - 5-Story Parking Garage
36 in CIDH Pile (B-1), Free Head

Enclosure "E-17"
Job No. 09162-3

PILE DEFLECTION & FORCE vs DEPTH

Single Pile, Khead=5, Kbc=2

Pile below Ground (NTS)

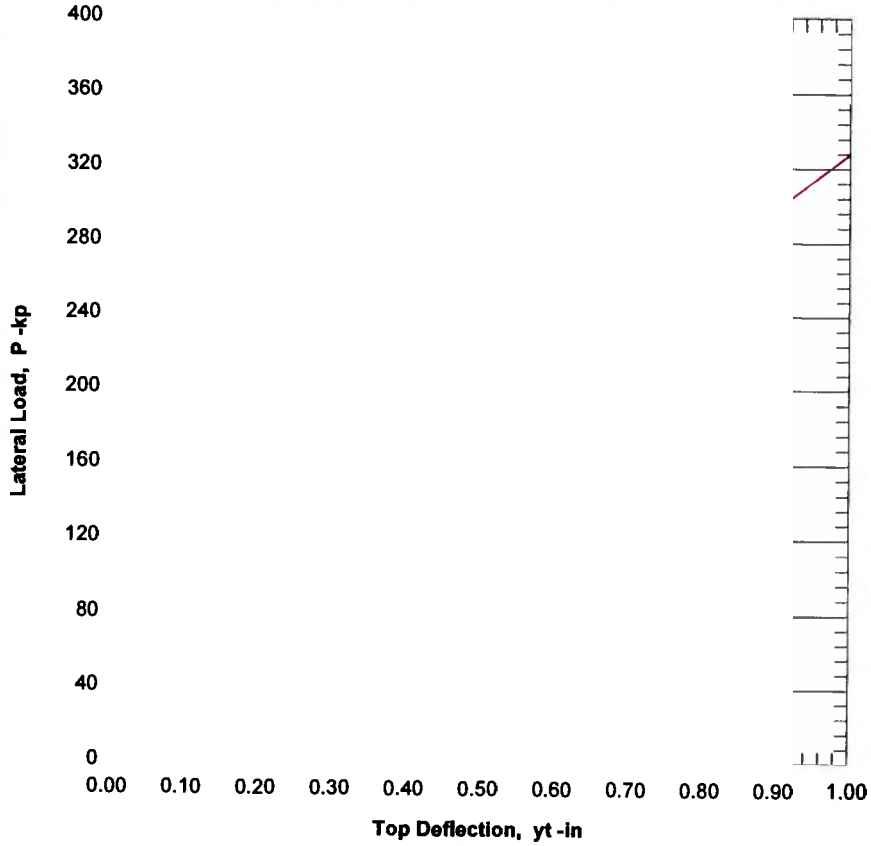


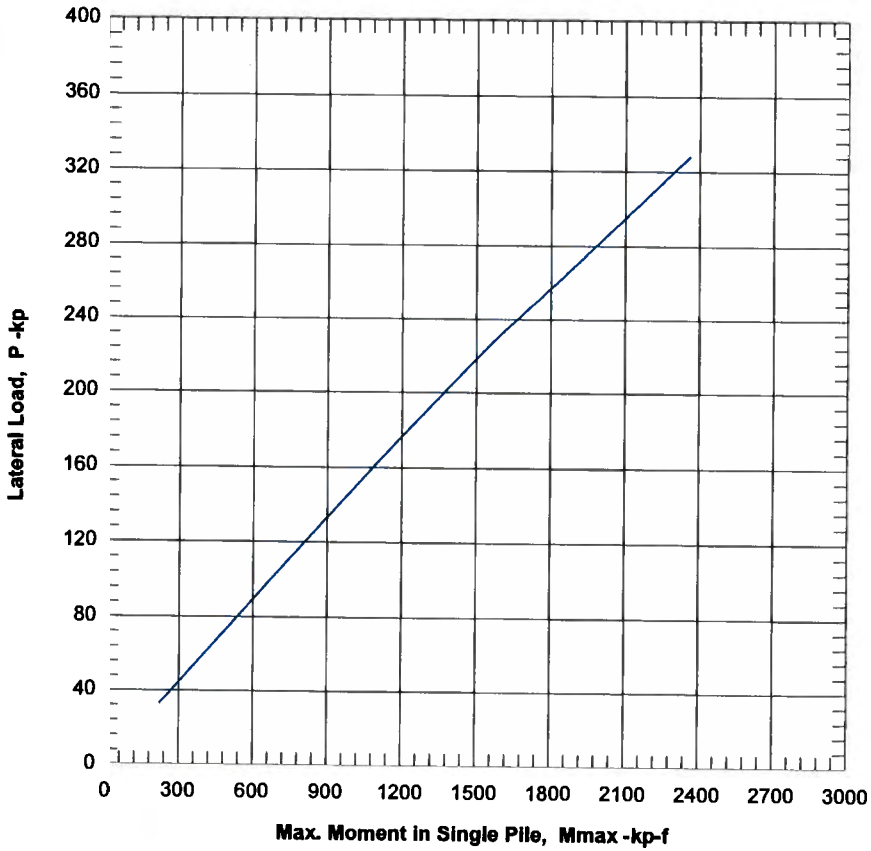
C.H.J. Incorporated

RCH - 5-Story Parking Garage
36 in CIDH Pile (B-1), Fixed Head

Enclosure "E-18"
Job No. 09162-3

LATERAL LOAD vs DEFLECTION & AX. MOMENT





C.H.J. Incorporated

RCH - 5-Story Parking Garage
36 in CIDH Pile (B-1), Fixed Head

36in CIDH (B-1) 09162-3

Downward and Uplift Capacity vs Pile Length

The results are for single section pile. Multiple sections may not be correct!
****

Length -ft	Qtip -kp	Qside -kp	Q_dw -kp	Qd_alw -kp	Weight -kp	Qsid* -kp	Q_up -kp	Qu_alw -kp
0.00	32.27	0.00	32.3	12.91	0.00	0.00	0.00	0.00
0.51	37.73	-0.63	37.1	14.78	0.53	0.36	0.89	0.65
1.01	43.19	-1.36	41.8	16.60	1.06	0.78	1.84	1.32
1.52	48.55	-2.17	46.4	18.33	1.60	1.24	2.84	2.02
2.02	53.94	-3.07	50.9	20.04	2.13	1.76	3.89	2.72
2.53	59.38	-4.08	55.3	21.71	2.68	2.33	5.01	3.45
3.03	64.87	-5.16	59.7	23.37	3.20	2.95	6.15	4.18
3.54	70.70	-6.33	64.4	25.11	3.73	3.62	7.35	4.94
4.04	76.60	-7.61	69.0	26.84	4.28	4.35	8.63	5.73
4.55	82.61	-8.97	73.6	28.56	4.81	5.12	9.93	6.52
5.05	88.77	-10.43	78.3	30.29	5.35	5.96	11.31	7.34
5.56	95.68	-11.94	83.7	32.30	5.89	6.82	12.71	8.16
6.06	102.76	-13.52	89.2	34.34	6.41	7.73	14.14	8.98
6.57	110.00	-15.22	94.8	36.39	6.95	8.70	15.65	9.85
7.07	117.44	-17.01	100.4	38.47	7.49	9.72	17.21	10.73
7.58	125.05	-18.89	106.2	40.58	8.02	10.79	18.81	11.62
8.08	132.87	-20.85	112.0	42.72	8.54	11.92	20.46	12.52
8.59	140.87	-22.92	118.0	44.89	9.08	13.10	22.18	13.45
9.09	149.55	-25.10	124.5	47.27	9.63	14.34	23.97	14.41
9.60	160.84	-27.35	133.5	50.66	10.17	15.63	25.80	15.38
10.10	172.44	-29.70	142.7	54.13	10.69	16.97	27.66	16.34
10.61	183.36	-32.25	151.1	57.22	11.21	18.43	29.64	17.36
11.11	194.73	-34.91	159.8	60.44	11.75	19.95	31.70	18.40
11.62	206.53	-37.68	168.8	63.77	12.30	21.53	33.83	19.47
12.12	218.84	-40.57	178.3	67.25	12.85	23.18	36.03	20.58
12.63	231.62	-43.50	188.1	70.89	13.38	24.86	38.24	21.66
13.13	244.93	-46.56	198.4	74.69	13.91	26.61	40.52	22.78
13.64	258.80	-49.73	209.1	78.65	14.45	28.42	42.87	23.93
14.14	273.23	-52.96	220.3	82.81	14.97	30.26	45.23	25.05
14.65	288.24	-56.34	231.9	87.13	15.52	32.19	47.71	26.25
15.15	303.47	-59.79	243.7	91.49	16.04	34.17	50.21	27.43
15.66	318.33	-63.42	254.9	95.63	16.57	36.24	52.80	28.64
16.16	333.71	-67.15	266.6	99.91	17.10	38.37	55.47	29.89
16.67	349.61	-70.99	278.6	104.35	17.63	40.57	58.20	31.15
17.17	364.52	-73.65	290.9	108.98	18.10	42.09	60.18	32.13
17.68	376.72	-73.69	303.0	113.84	18.42	42.11	60.53	32.46
18.18	389.52	-73.88	315.6	118.87	18.75	42.21	60.97	32.82
18.69	402.48	-73.84	328.6	124.07	19.03	42.19	61.23	33.10
19.19	415.64	-73.68	342.0	129.42	19.36	42.10	61.46	33.39
19.70	429.46	-73.72	355.7	134.93	19.69	42.12	61.82	33.73
20.20	444.00	-73.91	370.1	140.64	20.00	42.23	62.23	34.07
20.71	458.31	-73.59	384.7	146.53	20.27	42.05	62.32	34.29
21.21	470.17	-73.93	396.2	151.11	20.64	42.24	62.88	34.72
21.72	476.29	-73.67	402.6	153.68	20.92	42.10	63.02	34.95
22.22	482.86	-73.70	409.2	156.29	21.22	42.11	63.34	35.26
22.73	489.15	-73.59	415.6	158.87	21.52	42.05	63.57	35.54
23.23	495.94	-73.79	422.2	161.48	21.84	42.16	64.00	35.89
23.74	502.56	-73.92	428.6	164.06	22.21	42.24	64.45	36.29
24.24	508.99	-73.89	435.1	166.65	22.52	42.22	64.74	36.59
24.75	515.26	-73.75	441.5	169.23	22.82	42.14	64.96	36.87
25.25	522.03	-71.57	450.5	173.03	23.15	43.62	66.76	37.68
25.76	528.63	-66.06	462.6	178.42	23.41	46.81	70.21	39.01
26.26	535.10	-60.89	474.2	183.59	23.72	49.78	73.51	40.32
26.77	541.45	-55.40	486.1	188.88	24.04	52.83	76.87	41.65
27.27	547.67	-49.55	498.1	194.29	24.35	55.94	80.29	43.00
27.78	554.38	-43.87	510.5	199.82	24.69	59.44	84.13	44.50
28.28	561.09	-38.51	522.6	205.18	25.02	62.65	87.67	45.90
28.79	566.93	-32.35	534.6	210.60	25.26	65.57	90.83	47.11
29.29	574.07	-26.89	547.2	216.18	25.61	69.26	94.87	48.70
29.80	580.32	-21.40	558.9	221.43	25.94	72.29	98.23	50.03

30.30	586.59	-14.93	571.7	227.17	26.26	75.79	102.05	51.52
30.81	593.39	-9.29	584.1	232.72	26.54	79.27	105.80	52.96
31.31	599.38	-3.00	596.4	238.25	26.86	82.47	109.33	54.35
31.82	606.23	3.09	609.3	244.04	27.20	86.13	113.34	55.91
32.32	612.68	9.49	622.2	249.81	27.47	89.78	117.26	57.40
32.83	619.24	16.07	635.3	255.73	27.81	93.56	121.38	59.00
33.33	625.75	22.21	648.0	261.40	28.08	96.94	125.02	60.39
33.84	632.06	28.45	660.5	267.05	28.42	100.41	128.83	61.89
34.34	639.25	34.60	673.8	273.00	28.71	104.32	133.03	63.48
34.85	645.33	41.29	686.6	278.78	29.04	107.88	136.92	65.00
35.35	652.27	47.84	700.1	284.83	29.33	111.91	141.23	66.63
35.86	658.33	54.95	713.3	290.81	29.66	115.61	145.27	68.19
36.36	665.07	61.93	727.0	297.00	29.94	119.74	149.68	69.85
36.87	671.86	68.19	740.1	302.84	30.30	123.55	153.85	71.48
37.37	678.59	74.75	753.3	308.81	30.58	127.34	157.92	73.03
37.88	685.18	82.25	767.4	315.20	30.94	131.72	162.66	74.85
38.38	691.67	89.15	780.8	321.24	31.21	135.61	166.83	76.42
38.89	698.17	96.16	794.3	327.35	31.57	139.62	171.19	78.11
39.39	704.53	103.43	808.0	333.53	31.84	143.60	175.44	79.71
39.90	710.76	110.77	821.5	339.69	32.20	147.67	179.87	81.42
40.40	717.20	118.43	835.6	346.10	32.46	151.79	184.25	83.06
40.91	724.37	124.92	849.3	352.21	32.76	155.98	188.74	84.75
41.41	730.43	132.78	863.2	358.56	33.11	160.18	193.29	86.51
41.92	737.56	139.59	877.1	364.82	33.41	164.49	197.90	88.24
42.42	743.55	147.77	891.3	371.31	33.76	168.80	202.57	90.03
42.93	750.55	154.92	905.5	377.68	34.06	173.19	207.25	91.79
43.43	756.45	163.54	920.0	384.35	34.31	177.54	211.85	93.49
43.94	763.12	170.81	933.9	390.66	34.70	182.03	216.73	95.37
44.44	770.07	178.43	948.5	397.24	34.99	186.60	221.58	97.19
44.95	776.84	186.20	963.0	403.83	35.28	191.15	226.43	98.99
45.45	782.48	194.26	976.7	410.12	35.62	195.17	230.79	100.68
45.96	789.18	202.32	991.5	416.83	35.91	199.81	235.72	102.51
46.46	795.77	210.48	1006.2	423.55	36.19	204.51	240.70	104.36
46.97	802.44	218.71	1021.2	430.33	36.58	209.35	245.93	106.36
47.47	808.86	227.12	1036.0	437.11	36.86	214.12	250.97	108.23
47.98	815.53	234.74	1050.3	443.58	37.14	218.39	255.52	109.93
48.48	821.91	243.43	1065.3	450.48	37.41	223.25	260.66	111.83
48.99	828.33	252.18	1080.5	457.42	37.80	228.26	266.05	113.88
49.49	835.75	259.79	1095.5	464.19	38.12	233.35	271.47	115.90
50.00	842.19	269.01	1111.2	471.38	38.39	238.39	276.78	117.86

FACTOR OF SAFETY:

FSside	FStip	FSup	FSweight
2.0	2.5	3.0	1.0

Note: Data can be selected, copied and pasted to Excel to create graphics
Length - Pile length, distance from pile top to tip (not from ground surface)
Qtip - Ultimate pile tip resistance
Qside - Ultimate pile side resistance
Q_dw - Ultimate pile downward resistance
Qd_alw - Allowable pile downward resistance
Weight - Weight of pile shaft
Qsid* - Ultimate pile side uplift resistance
Q_up - Ultimate pile uplift resistance
Qu_alw - Allowable pile uplift resistance

CHJ Consultants
1355 E. Cooley Drive, Suite C, Colton, CA 92324 ◆ Phone (909) 824-7311 ◆ Fax (909) 503-1136
15345 Anacapa Road, Suite D, Victorville, CA 92392 ◆ Phone (760) 243-0506 ◆ Fax (760) 243-1225
77-564A Country Club Drive, Suite 122, Palm Desert, CA 92211 ◆ Phone (760) 772-8234 ◆ Fax (909) 503-1136

October 26, 2012

HCA

Job No. 12730-3

One Park Plaza, Building II-E

Nashville, Tennessee 37203

Attention: Mr. Bryan Seely, Director
Architectural and Design Services

Subject: Infiltration Test Report
On-Site Storm Water Retention System (Basins and Dry Well)
Proposed Parking Structure
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, California

Dear Mr. Seely:

Thank you for the opportunity to perform infiltration testing for the Riverside Community Hospital proposed parking structure in the City of Riverside, California. Three infiltration tests were performed on October 22, 2012, using methodology described in Appendix "A" of the "Riverside County – Low Impact Development BMP Design Handbook" (Design Handbook). The tests were performed to provide design infiltration rates and to characterize soils within the areas of the proposed systems.

FIELD INVESTIGATION:

On October 20, 2012, the test borings were placed by drilling 8-inch diameter borings to depths of 10 and 30 feet below the existing g ound surface (b s) with a CME 75 hollow-stem auger drill rig equipped for soil sampling. Soils were classified by our field geologist using the Unified Soil

Classification System (USCS). Intact samples of the lower soils were obtained utilizing a split-spoon sampler.

A concurrent geotechnical investigation was performed for the adjacent medical office building (CHJ Consultants Job No. 12735-3). In order to characterize deeper soils in the area, logs of Exploratory Boring Nos. 1 through 3, utilized for the geotechnical investigation, are included with this report. Exploratory Boring Nos. 4, 5 and 6, placed for the investigation of soil conditions in the area of the proposed basin/drywells, were utilized for Percolation Test Nos. 1, 2 and 3, respectively. The logs of the geotechnical exploratory borings, as well as the logs of the percolation test borings, are included in Appendix "B". The locations of all borings are indicated on the attached Site Plan (Enclosure "A-2").

SUBSURFACE SOIL CONDITIONS:

The soils tested were visually classified as silty sands (SM) to depths of approximately 15 feet. The silty sands are underlain by poorly graded sand with silt (SM-SP) and silty gravelly sand (SM) to the maximum depths tested of 30 feet.

Groundwater was encountered within Exploratory Boring Nos. 2 and 3 at depths of approx'mately 38 and 34 feet, respectively. Historical depth to high groundwater is approximately 29 feet bgs. Our percolation testing was performed at depths of 10 and 30 feet bgs.

Exploratory borings placed for purposes of a concurrent geotechnical investigation for the adjacent medical office building were extended to depths from 37 to 53-1/2 feet bgs. Soils encountered within the exploratory borings were generally similar to soils encountered in the test borings placed for purposes of the subject percolation/infiltration investigation, with the exception of Exploratory Boring Nos. 2 and 3, which did not encounter the poorly raded sand.

PERCOLATION TESTING:

Testing of the native soils was performed utilizing the percolation test method described in the Design Handbook for deep testing. The test method establishes a percolation rate, which is then converted to a design infiltration rate. The infiltration rate is a measure of the downward rate of water movement and does not include a measurement of sidewall infiltration.

The infiltration test borings were drilled on October 20, 2012. A 4-inch-diameter slotted PVC pipe was placed into each hole to minimize sidewall caving. Approximately 2 inches of gravel were placed in the bottoms of the borings. The test borings were presoaked on the day of drilling by filling each boring with water to within 4 feet of the ground surface and allowing the water to seep away.

The testing was performed by our senior field technician, Jose Escobedo, and supervised by our engineering geologist, John McKeown, on October 22, 2012. Weather on the days of drilling and testing consisted of clear skies with an average temperature of approximately 70 degrees.

On the day of testing, each hole was presoaked again by refilling and allowing at least 6 inches of water to seep away twice consecutively. Following the presoak period, tests were performed by filling the borings with water to 20 feet above the bottom for the 30-foot-deep test boring and 5 feet above the bottom for the 10-foot test borings and measuring the water surface drop for a 10-minute interval. The procedure was repeated five times for a total of six measurements. The measured percolation rates were then converted to infiltration rates. It should be noted that in many case measurements could only be made to the nearest food because of the rapid percolation rate.

TEST RESULTS:

The percolation rates obtained are presented in Appendix "C". The following table shows the calculated infiltrat'on rate at each location.

CALCULATED INFILTRATION RATE

Test No.	r	D_T	D_O	D_f	Δt	H_O	H_F	H_{avg}	ΔH	I_t
1	4	360	120	240	10	240	120	180	120	8
2	4	120	60	94	10	60	26	43	34	9
3	4	120	60	116	10	60	4	32	56	20

r = Test Hole Radius (inches)
D_T = Total Depth of Test Hole (inches)
D_O = Initial Depth to Water (inches)
D_F = Final Depth to Water (inches)
Δt = Time Interval (minutes)
H_O = Initial Height of Water (inches)
H_F = Final Height of Water (inches)
H_{avg} = Average Water Height (inches)
ΔH = Change in Water Height (inches)

$$I_t = \frac{\Delta H * 60r}{\Delta t(r+2H_{avg})}$$ = Tested Infiltration Rate (inches per hour)

DESIGN INFILTRATION RATE:

It should be noted that infiltration rates determined by testing are ultimate rates based on short-duration field test results utilizing clear water. Infiltration rates can be affected by silt buildup, debris, degree of soil saturation, biofouling and other factors. An appropriate safety factor should be applied prior to use in design to account for subsoil inconsistencies, possible soil densification related to site grading and potential silting of the percolating soils. The safety factor should also be determined with consideration to other factors in the storm water detention system design, particularly storm water volume estimates and the safety factors associated with those design components.

CLOSURE:

CHJ Consultants has striven to perform our services within the limits prescribed by our client, and in a manner consistent with the usual thoroughness and competence of reputable geotechnical engineers and engineering geologists practicing under similar circumstances. No other representation, express or implied, and no warranty or guarantee is included or intended by virtue of the services performed or reports, opinion, documents, or otherwise supplied.

This report reflects the testing conducted on the site as the site existed during the investigation, which is the subject of this report. However, changes in the conditions of a property can occur with the passage of time, due to natural processes or the works of man on this or adjacent properties. Changes in applicable or appropriate standards may also occur whether as a result of legislation, application or the broadening of knowledge. Therefore, this report is indicative of only those conditions tested at the time of the subject investigation, and the findings of this report may be invalidated fully or partially by changes outside of the control of CHJ Consultants. This report is therefore subject to review and should not be relied upon after a period of one year.

The conclusions and recommendations in this report are based upon observations performed and data collected at separate locations, and interpolation between these locations, carried out for the project and the scope of services described. It is assumed and expected that the conditions between locations observed and/or sampled are similar to those encountered at the individual locations where observation and sampling was performed. However, conditions between these locations may vary significantly. Should conditions be encountered in the field by the client or any firm performing services for the client or the client's assign, that appear different than those described herein, this firm should be contacted immediately in order that we might evaluate their effect.

If this report or portions thereof are provided to contractors or included in specifications, it should be understood by all parties that they are provided for information only and should be used as such.

The report and its contents resulting from this investigation are not intended or represented to be suitable for reuse on extensions or modifications of the project, or for use on any other project.

We appreciate this opportunity to be of service and trust this report provides the information desired at this time. Should questions arise, please do not hesitate to contact this office.

PROFESSIONAL GEOLOGIST
BENNIE DON WILLIAMS
NO. 7542
Exp. 1-31-13
STATE OF CALIFORNIA
10-30-2012

Respectfully submitted,

CHJ CONSULTANTS

Ben Williams, P.G. 7542
Project Geologist

Allen D. Evans, G.E. 2060
Vice President

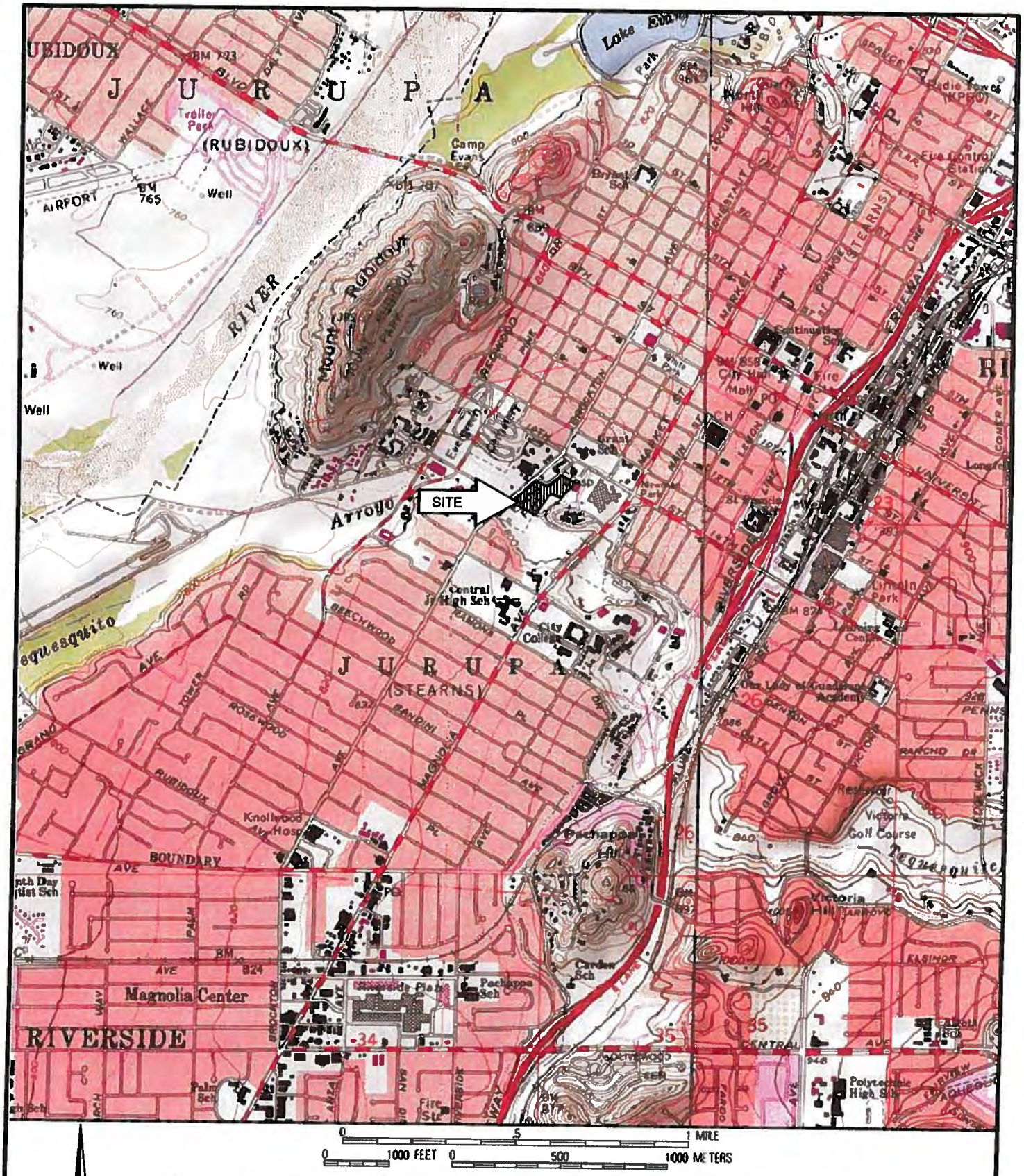
REGISTERED PROFESSIONAL ENGINEER
ALLEN D. EVANS
No. 2060
Exp. 03-31-13
GEOTECHNICAL
STATE OF CALIFORNIA
10-30-2012

BW/ADE:lb

Distribution: HCA (6)

Enclosures:	Location Map	"A-1"
	Site Plan	"A-2"
	Logs of Exploratory Borings	"B-1" - "B-6"
	Percolation Test Data	"C-1" - "C-3"

ATTACHMENT "A"



-N-

SCALE: 1" = 2000'

INDEX MAP

FOR: HCA MANAGEMENT SERVICES, L.P.	INFILTRATION TEST REPORT RIVERSIDE COMMUNITY HOSPITAL, 4445 MAGNOLIA AVENUE RIVERSIDE, CALIFORNIA	ENCLOSURE "A-1"
DATE: OCTOBER 2012		JOB NUMBER 12730-3

CHJ Consultants

SCALE: 1" = 80'

LEGEND:

B-3 GEOTECHNICAL BORING LOCATION

B-6 DH PERCOLATION TEST BORING LOCATION

SITE PLAN

FOR: HCA MANAGEMENT SERVICES, L.P.

DATE: OCTOBER 2012

INFILTRATION TEST REPORT
RIVERSIDE COMMUNITY HOSPITAL, 4445 MAGNOLIA AVENUE
RIVERSIDE, CALIFORNIA

ENCLOSURE "A-2"

JOB NUMBER 12730-3

CHJ Consultants

ATTACHMENT "B"

EXPLORATORY BORING NO. 1

Date Drilled: 10/20/12

Client: HCA

Equipment: CMF 55

Driving Weight / Drop: 130 lbs./30"

Surface Elevation(ft): N/A

Logged by: VJR

Measured Depth to Water(ft): N/A

DEPTH	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	UNCORR. BLOWS/ft	FIELD MOISTURE	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
	3.5" of Asphalt Concrete	Fill						
	5" of Aggregate Base							
	(SM) Silty Sand, fine to medium with coarse, with clay, brown		X	▩	3 1 4	11.5		Cor. SPT
	(SM) Silty Sand, fine to medium, brown	Native		▩		10.1		DS, Exp., Hydro., MDC
5			X		1 1 2			SPT, P#200
	(SM) Silty Sand, fine to medium with gravel to 2", brown			▩		3.1		
10			X		2 2 3			SPT, P#200
15			X		10 30 50/3"			SPT, P#200
	(SM) Silty Gravelly Sand, fine to med um w t coarse and gravel to 2", brown							
20			X		37 50/5"			SPT, P#200
25			X		22 38 39			SPT, P#200
30			X		50 50/4"			SPT, P#200

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3.GPJ CHJ GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. 12730-3

Enclosure B-1a

EXPLORATORY BORING NO. 1

Date Drilled: 10/20/12

Client: HCA

Equipment: CMF 55

Driving Weight / Drop: 130 lbs./30"

Surface Elevation(ft): N/A

Logged by: VJR

Measured Depth to Water(ft): N/A

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	LAB/FIELD TESTS
		(SM) Silty S 2", light bro	SPT, #200
		END OF BORING	
40		NO BEDROCK REFUSAL AT 37 0' FILL TO 3.0', SLIGHT CAVING NO GROUNDWATER	
45			
50			
55			
60			
65			

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3 GPJ CHJ GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. 12730-3

Enclosure B-1b

EXPLORATORY BORING NO. 2

Date Drilled: 10/24/12

Client: HCA

Equipment: CME75

Driving Weight / Drop 130 lbs./30"

Surface Elevation(ft): N A

Logged by JMc

Measured Depth to Water(ft): 37.5

Depth	VISUAL CLASSIFICATION	Blows	Moisture	TESTS
				.. Cor.
	(SM) Silty Sand, fine with medium, brown			Exp., Hydro., MDC
5		3 4 4		SPT, P#200
10	(SM) Silty Sand, fine to medium with coarse, brown		4.9	
		2 3 4		SPT, P#200
15	(SM) Silty Sand, fine to coarse, brown			
		20 30 27		SPT, P#200
20	(SM) Silty Gravelly Sand, fine to medium with coarse, gravel to 1", brown			
		32 27 27		SPT, P#200
25		39 50/5"		SPT, P#200
30		50/5"		SPT, P#200

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3.GPJ CHJ GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. Enclosure
12730-3 B-2a

EXPLORATORY BORING NO. 2

Date Drilled: 10/24/12

Client: HCA

Equipment: CME75

Driving Weight / Drop: 130 lbs./30"

Surface Elevation(ft): N A

Log ·ed by. JMc

Measured Depth to Water(ft). 37.5

Depth	VISUAL CLASSIFI ATION			TESTS
	(SM) Silty Gravelly Sand, fine to medium with coarse, ·ravel to 1", brown			
		50/3"		SPT, P#200
40				
		50		SPT, P#200
45				
		41 50/4"		SPT, P#200
50				
		50/4"		SPT, P#200
	END OF BORING			
55	NO BEDROCK O REFUSAL FILL TO 3.5' NO CAVING GROUNDWATER AT 37 5'			
60				
65				

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3 GPJ CHJ GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. 12730-3

Enclosure B-2b

EXPLORATORY BORING NO. 3

Date Drilled: 10/24/12

Client: HCA

Equipment: CME75

Driving Weight / Drop. 130 lbs./30"

Surface Elevation(ft): N/A

Logged by: JMc

Measured Depth to Water(ft): 34.2

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION				LAB/FIELD TESTS
						r., Exp.
		(SM) Silty Sand, fine, dark brown				
5			5 5 5	9.4	102	, Exp., Hydro., MDC Ring
10			4 5 7	9.7	109	Ring, Consol., DS
15			4 4 6	11.2	116	Ring
20		(SM) S lty S nd, fine to medium w th coarse with ravel to 1", brown	9 23 50/3"	5.3 3.7	127	Ring, P#200
25			42 50/5"	3.9	123	Ring, P#200
30			50/4"	4.4	118	Ring, P#200

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3.GPJ CHJ GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. Enclosure
12730-3 B-3a

EXPLORATORY BORING NO. 3

Date Drilled: 10/24/12

Client: HCA

Equipment: CME75

Driving Weight / Drop: 130 lbs./30"

Surface Elevation(ft). N/A

Logged by: JMc

Measured Depth to Water(ft): 34.2

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION					LAB/FIELD TESTS
		(SM) Silty Sand, fine to coarse with gravel to 1", brown			12		Ring, P#200
40				50/5"	16.0	112	Ring, P#200
45				42 50/4"	18.3	113	Ring, P#200
50				50/3"	13.3	122	Ring, P#200
		END OF BORING					
55		NO BEDROCK NO REFUSAL FILL TO 3.5' NO CAVING GROUNDWATER AT 34.2'					
60							
65							

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3.GPJ CHJ.GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. 12730-3

Enclosure B-3b

EXPLORATORY BORING NO. 4

Date Drilled: 10/20/12

Client: HCA

Equipment: CME 55

Driving Weight / Drop: 130 lbs. 30"

Surface Elevation(ft): N/A

Logged by: VJR

Measured Depth to Water(ft): N/A

DEPTH (ft)	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	UNCORR BLOWS/6"	FIELD MOISTURE	DRY UNIT (pcf)	LAB/FIELD TESTS
	4" of Asphalt Concrete	Fill						
	5" of Aggregate Base							
	(SM) Silty Sand, fine to medium, brown					7.9		
	(SM) Silty Sand, fine with medium, few clay, brown	Native				10.8		
5								
10					3 3 5			SPT
15	(SP-SM) Sand, fine to medium with coarse with silt, few clay and gravel to 1" brown					5.7		
20					20 29 43			SPT
25								
30					49 42 47			SPT
	END OF BORING NO REFUSAL, NO BEDROCK, FILL TO 4.0', NO CAVING, NO GROUNDWATER							

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3.GPJ CHJ.GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. 12730-3

Enclosure B-4

EXPLORATORY BORING NO. 5

Date Drilled: 10/20/12

Client: HCA

Equipment: CMF 55

Driving Weight / Drop: 130 lbs /30"

Surface Elevation(ft): N/A

Logged by: VJR

Measured Depth to Water(ft): N/A

VISUAL CLASSIFICATION	LAB/FIELD TESTS
(SM) Silty Sand, fine with medium, dark brown	
END OF BORING	
NO BEDROCK NO REFUSAL FILL TO 4.0' NO CAVING NO GROUNDWATER	

Depth	Blows	Type
10	2 2 4	SPT

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3.GPJ CHJ GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. Enclosure
12730-3 B 5

EXPLORATORY BORING NO. 6

Date Drilled: 10/20/12

Client: HCA

Equipment: CME 55

Driving Weight / Drop: 130 lbs./30"

Surface Elevation(ft): N/A

Logged by: VJR

Measured Depth to Water(ft): N/A

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	UNCORRECTED BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		3" of Asphalt Concrete	Fill						
		5" of Aggregate Base			▩		12.0		
		(SM) Silty Sand, fine to medium, with clay, brown							
		(SM) Silty Sand, fine with medium, brown	Native		▩		12.9		
5									
10				☒		2 3 4			SPT
		END OF BORING							
		NO BEDROCK NO REFUSAL FILL TO 3.0' NO CAVING NO GROUNDWATER							
15									
20									
25									
30									

BORING LOG - NO EQUIV & BLOW PER 6 IN 12730-3.GPJ CHJ.GDT 10/30/12

C.H.J.

PARKING GARAGE
RIVERSIDE COMMUNITY HOSPITAL

Job No. 12730-3

Enclosure B-6

ATTACHMENT "C"

Percolation Test Data Sheet

Project:	RCH Parking Struct.	Project No:	12730-3	Date:	10-22-12
Test Hole No:	1	Tested By:	Jose Escobedo		
Depth of Test Hole, D_T:	30	USCS Soil Classification:	SP-SM		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round)=	8	Sides (if rectangular)=	—	—	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Time Interval, (min.)	Initial Depth to Water (in.)	Final Depth to Water (in.)	Change in Water Level (in.)	Greater than or Equal to 6"? (y/n)
1	9:30	9:35	5	120	216	96	Y
2	9.40	9:42	2	120	204	84	Y

If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test hall be run for an additional hour with measurements taken every 10 minutes. Other wise, pre-soak (fill) overnight. Obtain at l ast twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min.)	D_o Initial Depth to Water (in.)	D_f Final Depth to Water (in.)	ΔD Change in Water Level (in.)	Percolation Rate (min./in)
1	9:50	10.00	10	120	204	84	8.4
2	10:02	10:12	10	120	240	120	12.0
3	10:15	10:25	10	120	252	232	23.2
4	10:28	10:38	10	120	264	244	24.4
5	10:40	10:50	10	120	240	120	12.0
6	10:55	11.05	10	120	264	244	24.4
7							
8							
9							
10							
11							
12							
13							
14							
15							

COMMENTS:

Percolation Test Data Sheet

Project:	RCH Parking Struc	Project No:	12730-3	Date:	10-22-12
Test Hole No:	2	Tested By:	Jose Escobedo		
Depth of Test Hole, D_T:	10'	USCS Soil Classification:	SM		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round)=	8"	Sides (if rectangular)=	—	—	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Time Interval, (min.)	Initial Depth to Water (in.)	Final Depth to Water (in.)	Change in Water Level (in.)	Greater than or Equal to 6"? (y/n)
1	11.18	11:23	5	60	96	36	Y
2	11:29	11.34	5	60	96	36	Y

If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Otherwise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_o Initial Depth to Water (in.)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in.)	Percolation Rate (min./in.)
1	11:41	11:51	10	60	90	30	3.0
2	11:55	12:05	10	60	84	24	2.4
3	12:06	12:16	10	60	90	30	3.0
4	12:20	12:30	10	60	91	31	3.1
5	12:32	12:42	10	60	92	32	3.2
6	12:43	12:53	10	60	94	34	3.4
7							
8							
9							
10							
11							
12							
13							
14							
15							

COMMENTS:

Percolation Test Data Sheet

Project:	RCH Parking Struct	Project No:	12730-3	Date:	10-22-12
Test Hole No:	3	Tested By:	Jose Escobedo		
Depth of Test Hole, D_T:	10'	USCS Soil Classification:	SM		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round)=	8"	Sides (if rectangular)=	—	—	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Time Interval, (min.)	Initial Depth to Water (in.)	Final Depth to Water (in.)	Change in Water Level (in)	Greater than or Equal to 6"? (y/n)
1	13:01	13:26	25	60	113	53	Y
2	13:30	13:55	25	60	112	52	Y

If two consecutive measurements how that six inches o water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes Other wise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_o Initial Depth to Water (in)	D_f Final Depth to Water (in.)	ΔD Change in Water Level (in.)	Percolation Rate (min./in)
1	13:56	14:06	10	60	116	56	5.6
2	14:09	14:19	10	60	116	56	5.6
3	14:20	14:30	10	60	115	55	5.5
4	14:31	14:41	10	60	116	56	5.5
5	14:42	14:52	10	60	116	56	5.5
6	14:53	15:03	10	60	116	56	5.5
7							
8							
9							
10							
11							
12							
1							
14							
15							

COMMENTS:

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

Historical Site Conditions information is not available at this time but will be provided with Final WQMP.

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

N/A – Not Applicable – LID Provided

Appendix 6: BMP Design Details

BMP Sizing, Design Details, and other Supporting Documentation

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Kimley-Horn and Associates, Inc.	Date	5/15/2013
Designed by	Adam Schmid	Case No	
Company Project Number/Name	Riverside Community Hospital		

BMP Identification

BMP NAME / ID: Infiltration System

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.55 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
PRKG	*99050*	*Mixed Surface Types*	*1*	*0.89*	*88352.6*			
PRKG	*38010*	*Turf block*	*0.1*	*0.11*	*4198.5*			
MOB	*41920*	*Mixed Surface Types*	*1*	*0.89*	*37392.6*			
MOB	*25460*	*Turf block*	*0.1*	*0.11*	*2812.3*			
TWR 1	*113570*	*Concrete or Asphalt*	*1*	*0.89*	*101304.4*			
TWR 1	*11630*	*Turf block*	*0.1*	*0.11*	*1284.6*			
TWR 2	*56940*	*Roofs*	*1*	*0.89*	*50790.5*			
	386580		***Total***		**286135.5**	**0.55**	***13114.5***	

Proposed Volume must be greater than the Design Capture Volume

Notes:

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Kimley-Horn and Associates, Inc.	Date	5/15/2013
Designed by	Adam Schmid	Case No	
Company Project Number/Name	Riverside Community Hospital		

BMP Identification

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85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.55 inches

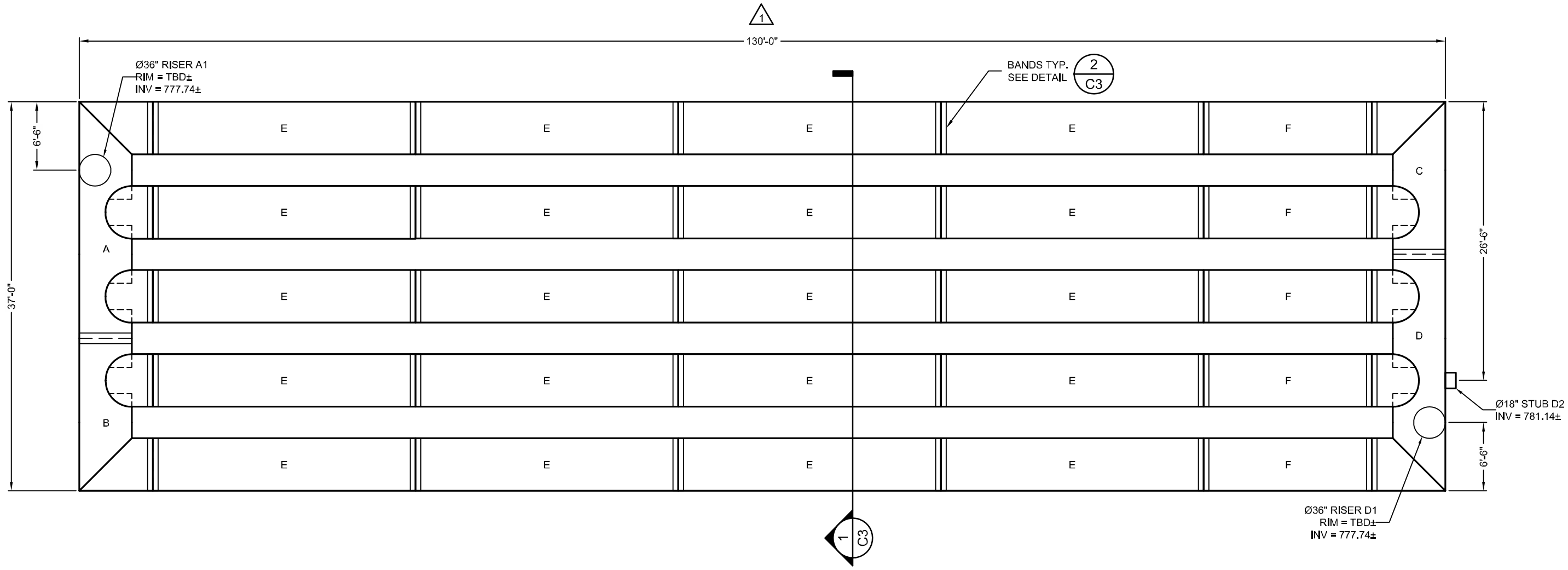
Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
MLA	*20000*	*Roofs*	*1*	*0.89*	*17840*			
	20000		***Total***		**17840**	**0.55**	***817.7***	

Proposed Volume must be greater than the Design Capture Volume

Notes:



THE UNDERSIGNED HEREBY APPROVES THE ATTACHED (7) PAGES INCLUDING THE FOLLOWING:

- **VOLUME = 20,296 CF**
- **MAINLINE PIPE GAUGE = 16**
- **WALL TYPE = PERFORATED**
- **DIAMETER = 60"**
- **FINISH = GALV**

CUSTOMER _____ DATE _____

ASSEMBLY

SCALE: 1" = 10'
VOLUME IN PIPE: 13,234 C.F.
VOLUME IN STONE VOIDS: 7,062 C.F. 1
TOTAL VOLUME: 20,296 C.F.
LOADING: H20/H25
SYSTEM INV = 777.74

NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
- ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 2⅔" x ½" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.

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Ø60" UNDERGROUND RETENTION SYSTEM - 473876-010
RIVERSIDE COMMUNITY HOSPITAL- PARKING GARAGE ADD
RIVERSIDE, CA
SITE DESIGNATION: NOTE 16, SHEET C-501

PROJECT No.:	SEQ. No.:	DATE:
473876	010	4/3/2013
DESIGNED: GM	DRAWN: FCS	
CHECKED:	APPROVED:	
SHEET NO.: C1 OF 7		

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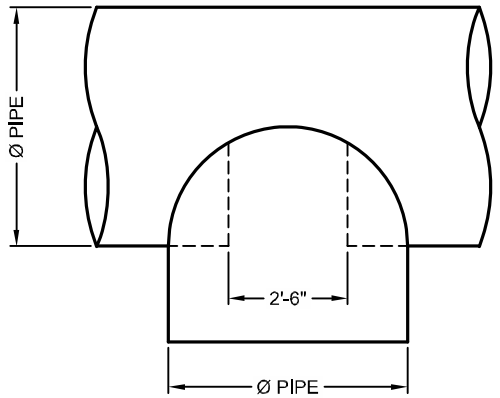
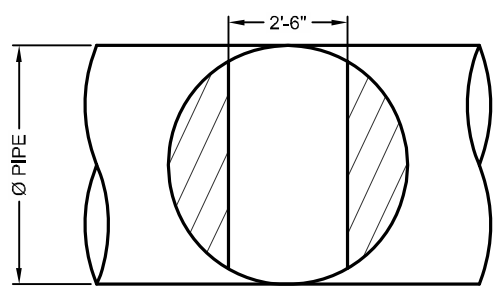


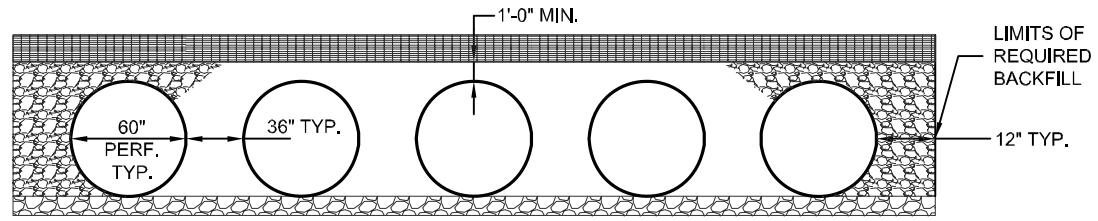
PLAN



FRONT

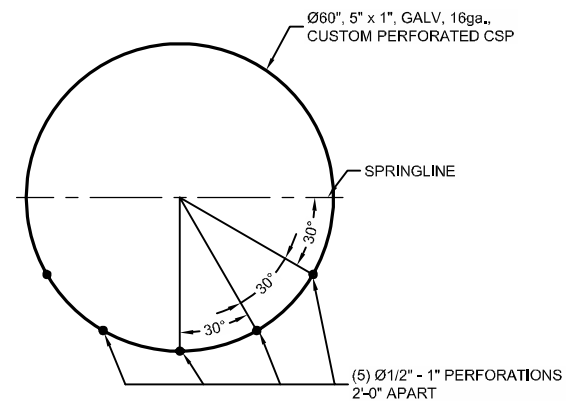
TYPICAL MANWAY DETAIL

SCALE: N.T.S.



TYPICAL SECTION VIEW

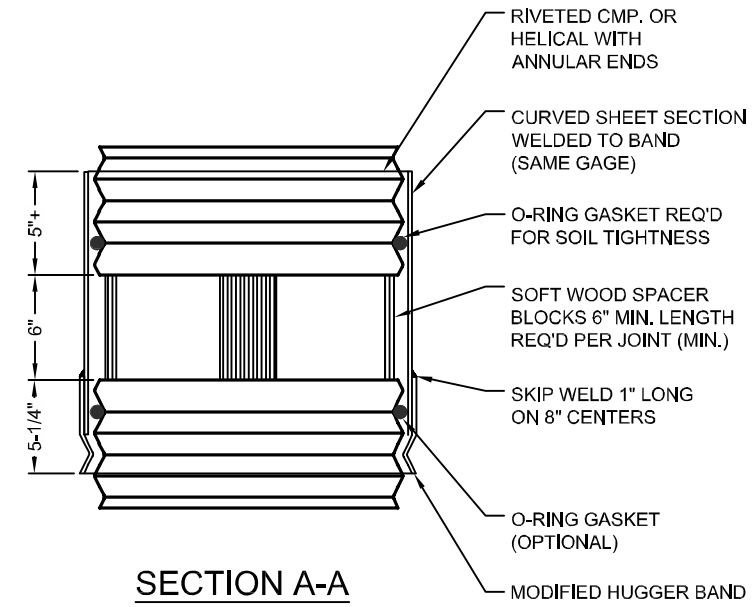
SCALE: N.T.S.



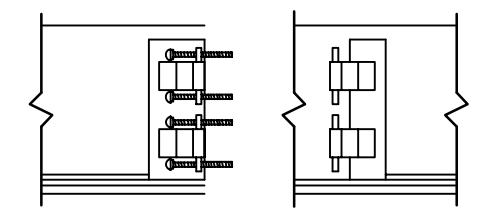
TYPICAL PERFORATION DETAIL

SCALE: N.T.S.

TOP VIEW



SECTION A-A



CONNECTION DETAIL DOUBLE BOLT, BAR & STRAP

FABRICATION BoM (1)									
FITTING	TYPE	QTY	Ø	CORRUGATION	GAGE	FINISH	WALL TYPE	LENGTH	TOTAL
A	MANIFOLD	1	60	5 x 1	16	GALV	Perforated	24.5	24.5
A - TEE	TEE	2	60	5 x 1	16	GALV	Perforated	4.5	9
A1	RISER	1	36	2 2/3x1/2	16	GALV	Solid	TBD	TBD
B	MANIFOLD	1	60	5 x 1	16	GALV	Perforated	16.5	16.5
B - TEE	TEE	1	60	5 x 1	16	GALV	Perforated	4.5	4.5
C	MANIFOLD	1	60	5 x 1	16	GALV	Perforated	16.5	16.5
C - TEE	TEE	1	60	5 x 1	16	GALV	Perforated	4.5	4.5
D	MANIFOLD	1	60	5 x 1	16	GALV	Perforated	24.5	24.5
D - TEE	TEE	2	60	5 x 1	16	GALV	Perforated	4.5	9
D1	RISER	1	36	2 2/3x1/2	16	GALV	Solid	TBD	TBD
D2	STUB	1	18	2 2/3x1/2	16	GALV	Solid	2.78	2.78
E	PIPE	20	60	5 x 1	16	GALV	Perforated	25	500
F	PIPE	5	60	5 x 1	16	GALV	Perforated	16	80
BAND FASTENER	12" DIMPLE	32	60	w/7" TECHCO RV	16	GALV			
LADDERS	LADDER	2							

GENERAL NOTES:

1. BAND MATERIAL & GAGE TO BE SAME AS RISER MATERIAL.
2. IF RISER HAS A TOTAL HEIGHT OF 10' OR MORE, USE A SLIP JOINT.
3. ALL RISER SLIP JOINT COMPONENTS WILL BE FIELD ASSEMBLED.
4. MANHOLE RISERS IN APPLICATIONS WHERE TRAFFIC LOADS ARE IMPOSED REQUIRE SPECIAL DESIGN CONSIDERATIONS.
5. DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.

SLIP JOINT DETAIL

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SITE DESIGNATION: NOTE 16, SHEET C-501

PROJECT No.: 473876	SEQ. No.: 010	DATE: 4/3/2013
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CHECKED:	APPROVED:	
SHEET NO.: C2 OF 7		

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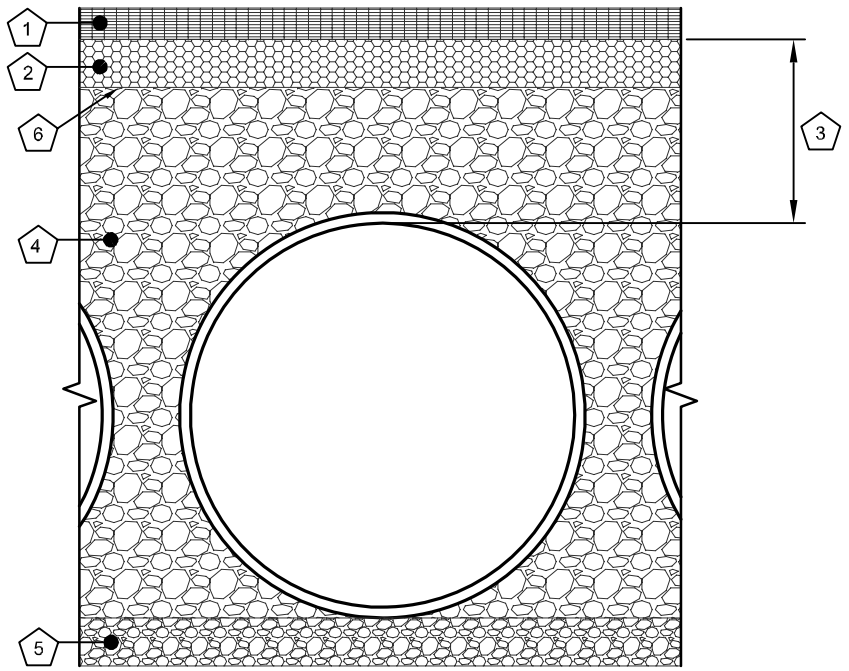


KEY

1.) RIGID OR FLEXIBLE PAVEMENT

2.) GRANULAR ROAD BASE

3.) 12" MIN. FOR DIAMETERS THROUGH 96"
18" MIN. FOR DIAMETERS FROM 102"
AND LARGER MEASURED TO TOP OF
RIGID OR BOTTOM OF FLEXIBLE
PAVEMENT.

4.) FREE DRAINING ANGULAR WASHED
STONE ¾" - 2" PARTICLE SIZE.
COMPACT TO MIN. 90% STANDARD
DENSITY PER AASHTO T99.

5.) GRANULAR BEDDING, ROUGHLY
SHAPED TO FIT THE BOTTOM OF PIPE,
4"- 6" IN DEPTH.

6.) CONTECH C-40 NON-WOVEN
GEOTEXTILE REQUIRED, WRAPPING
TRENCH SIDES AND TOP ONLY.

FOUNDATION/BEDDING PREPARATION

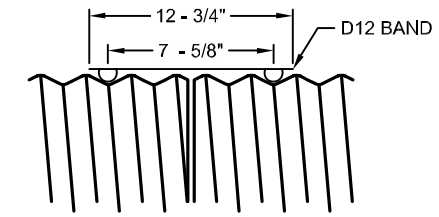
PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE 4 INCHES OF A WELL-GRADED GRANULAR MATERIAL SHALL BE PLACED AS THE BEDDING.

BACKFILL

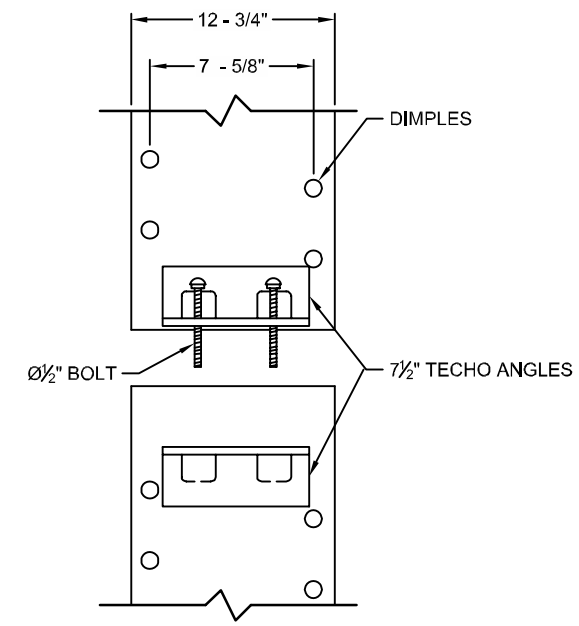
FREE DRAINING ANGULAR WASHED STONE ¾" - 2" PARTICLE SIZE. COMPACT TO MIN. 90% STANDARD DENSITY PER AASHTO T99 AS APPROVED BY THE ENGINEER (SEE INSTALLATION GUIDELINES). WHEN PLACING THE FIRST LIFTS OF BACKFILL IT IS IMPORTANT TO MAKE SURE THAT THE BACKFILL IS PROPERLY COMPACTED UNDER AND AROUND THE PIPE HAUNCHES. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO LIFT (16") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE DETENTION SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON THE PIPE.

OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.

1 / C3 BACKFILL DETAIL
SCALE: N.T.S.



STANDARD SECTION



CONNECTION DETAIL

GENERAL NOTES:

1. REFER TO CONTECH BAND SELECTION GUIDE FOR BAND WIDTH, GAGE, AND FASTENER TYPES.

2. BANDS FOR PIPE-ARCH ARE THE SAME AS FOR EQUIVALENT DIAMETER ROUND PIPE.

3. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
12" THRU 48" 1-PIECE
54" THRU 96" 2-PIECE
102" THRU 144" 3-PIECES.

4. BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.

5. REROLLED ANNULAR END CORRUGATIONS ARE NORMALLY 2-2/3" X 1/2".

6. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.

2 / C3 DIMPLE BAND DETAIL
SCALE: N.T.S.

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SITE DESIGNATION: NOTE 16, SHEET C-501

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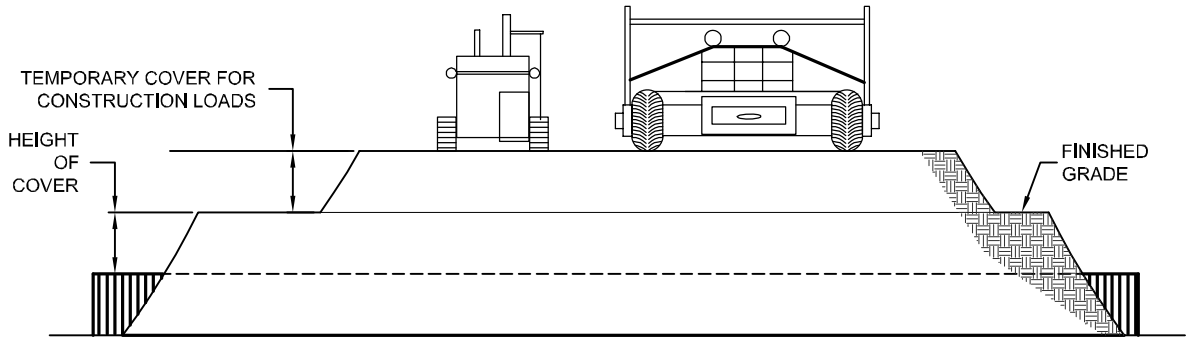


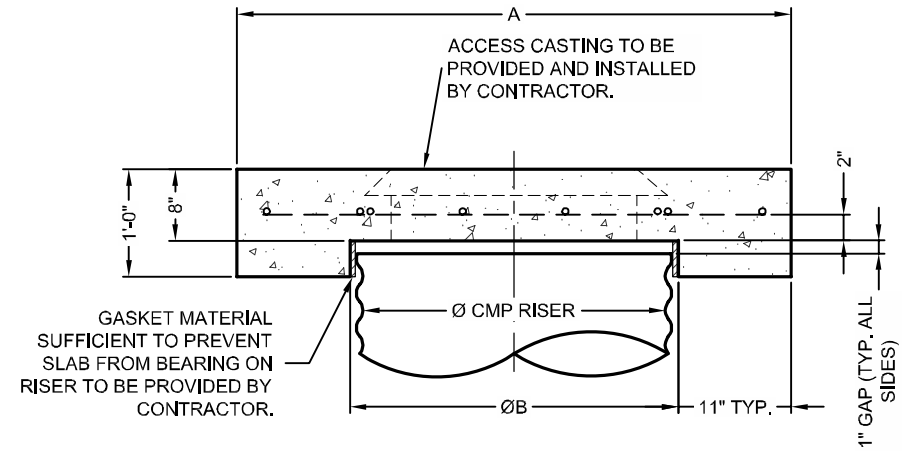
CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

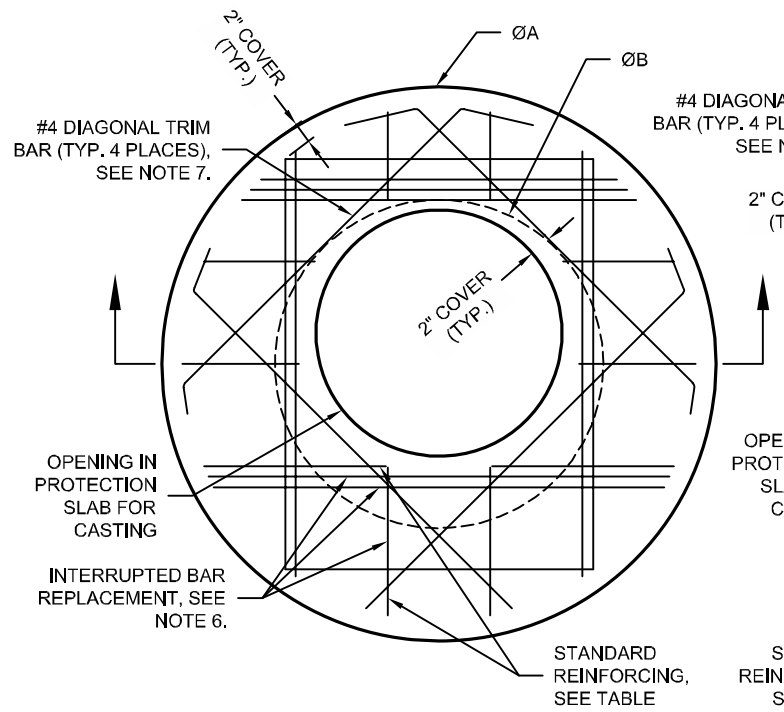
3 / C4 CONSTRUCTION LOADING DIAGRAM
SCALE: N.T.S.



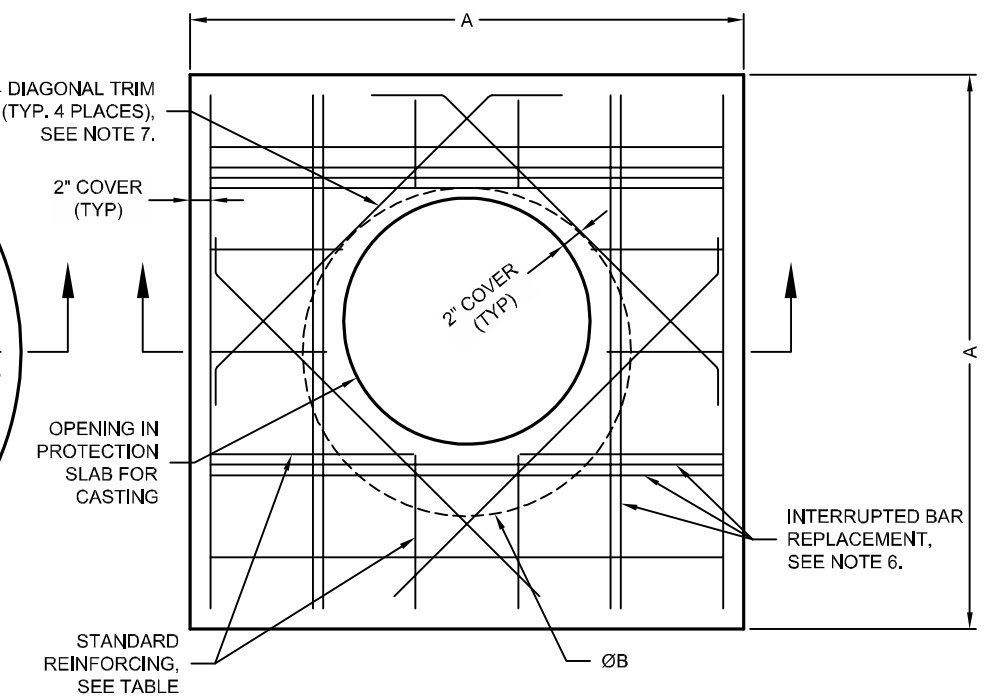
SECTION VIEW

REINFORCING TABLE				
Ø CMP RISER	A	Ø B	REINFORCING	**BEARING PRESSURE (PSF)
24"	Ø 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	Ø 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	Ø 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	Ø 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	Ø 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

SPECIFICATION FOR CORRUGATED STEEL PIPE - GALVANIZED STEEL :

SCOPE

THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE GALVANIZED CORRUGATED STEEL PIPE(CSP) DETAILED IN THE PROJECT PLANS.

MATERIALS

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M 218 OR ASTM A 929.

PIPE

THE CSP SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M-36 OR ASTM A 760. THE PIPE SIZES, GAGES AND CORRUGATIONS SHALL BE AS SHOWN ON THE PROJECT PLANS.

ALL FABRICATION OF THE PRODUCT SHALL OCCUR WITHIN THE UNITED STATES.

HANDLING AND ASSEMBLY

SHALL BE IN ACCORDANCE WITH NCSPAS (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) RECOMMENDATIONS.

INSTALLATION

SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II OR ASTM A 798 AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS, THE CONTRACTOR MUST BRING THEM TO THE ATTENTION OF THE SITE ENGINEER.

IT IS RESPONSIBILITYOF THE CONTRACTORS TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

CONSTRUCTION LOADS

CONSTRUCTION LOADS MAY BE HIGHER THAT FINAL LOADS. FOLLOW THE MANUFACTURERS OR NCSPA'S GUIDELINES.

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

4 / C4 MANHOLE CAP DETAIL
SCALE: N.T.S.

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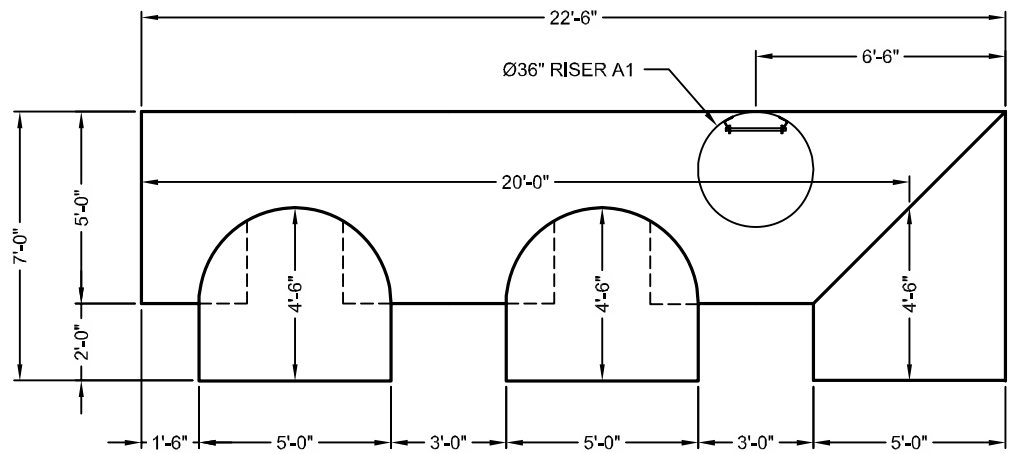
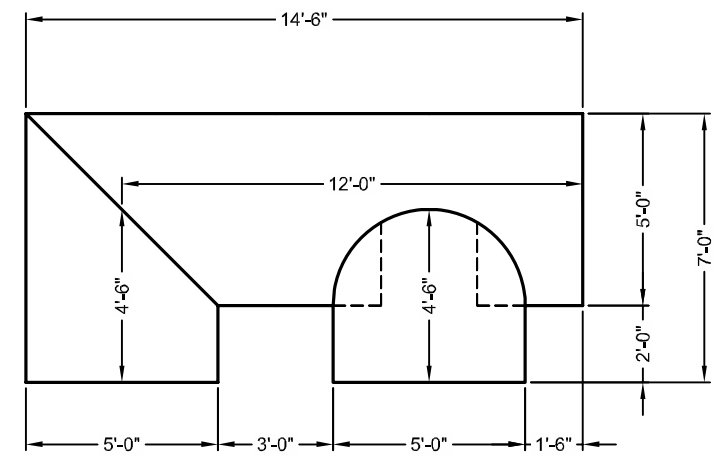
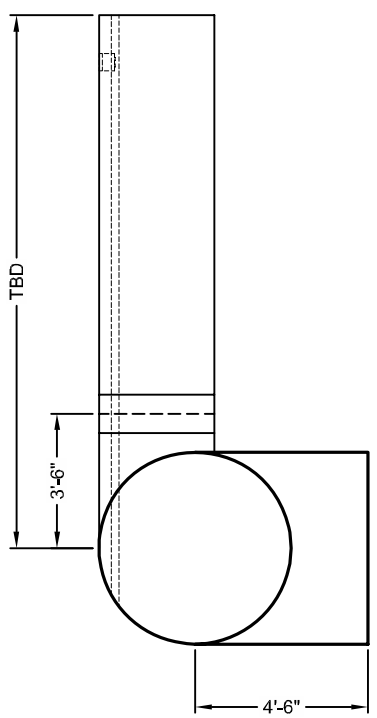


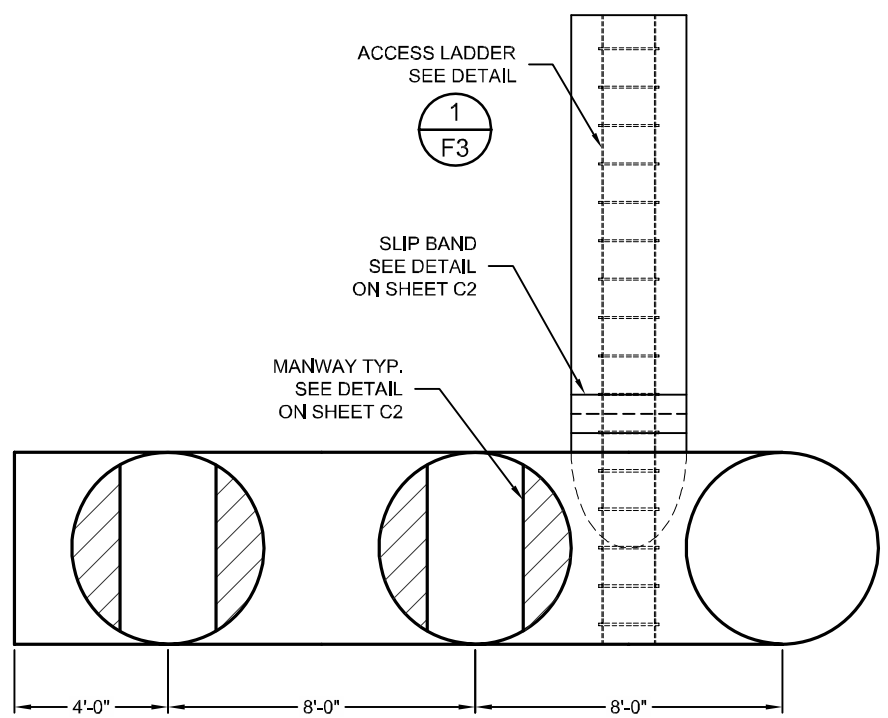
PLAN VIEW



PLAN VIEW



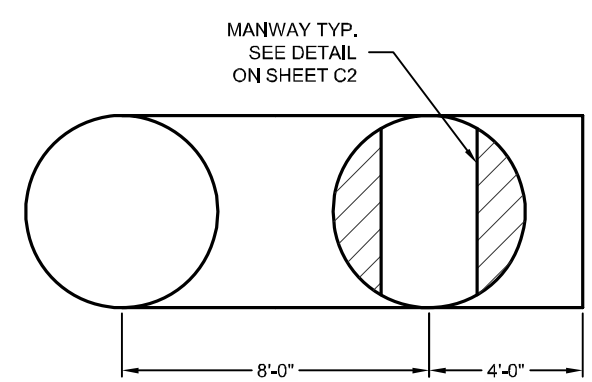
LEFT VIEW



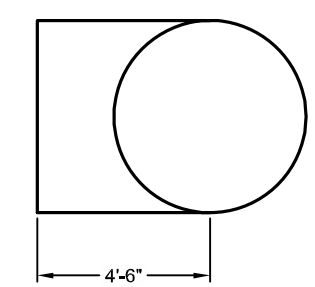
ELEVATION VIEW

PART A

SCALE: 1" = 5' 1



ELEVATION VIEW



RIGHT VIEW

PARTS B & C

SCALE: 1" = 5'

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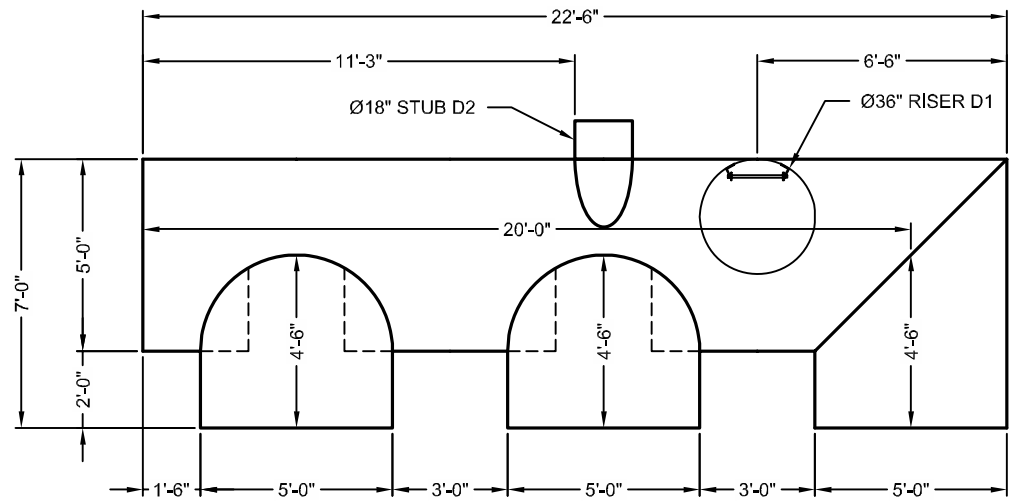
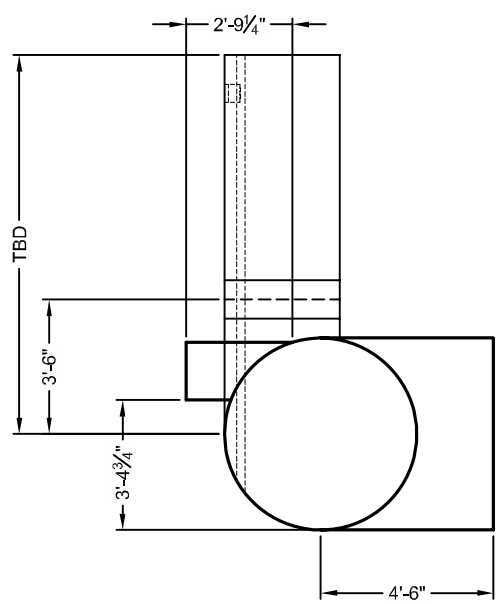
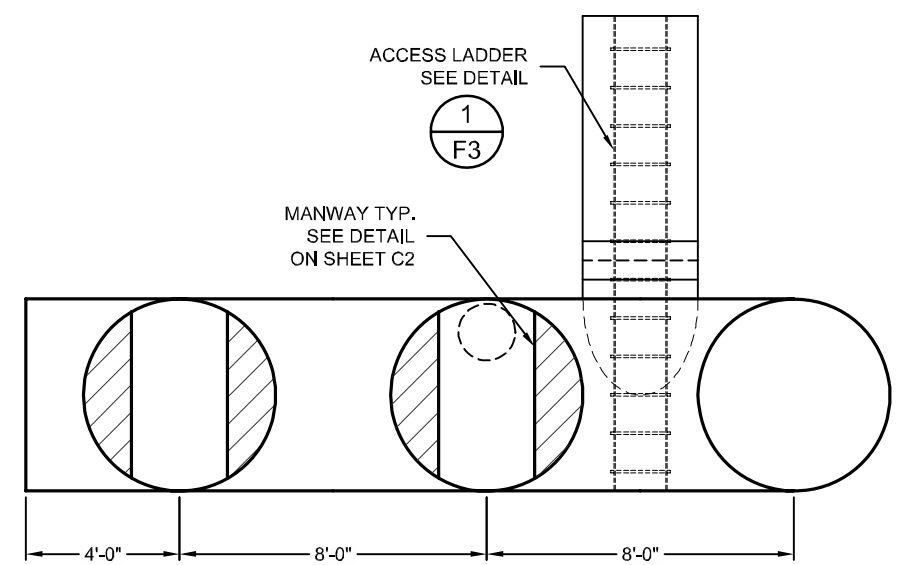


PLAN VIEW



LEFT VIEW



ELEVATION VIEW

PART D

SCALE: 1" = 5' (1)

PROVIDED FOR YOUR INFORMATION ONLY
INTENDED FOR PLANT USE

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If discrepancies between the supplied information upon which the drawing is based and actual field conditions are encountered as site work progresses, these discrepancies must be reported to Contech immediately for re-evaluation of the designs. Contech accepts no liability for designs based on missing, incomplete or inaccurate information supplied by others.

MARK	DATE	REVISION DESCRIPTION	BY
1	4/19/13	REVISED LENGTH & INVERT OF SYSTEM	FCS

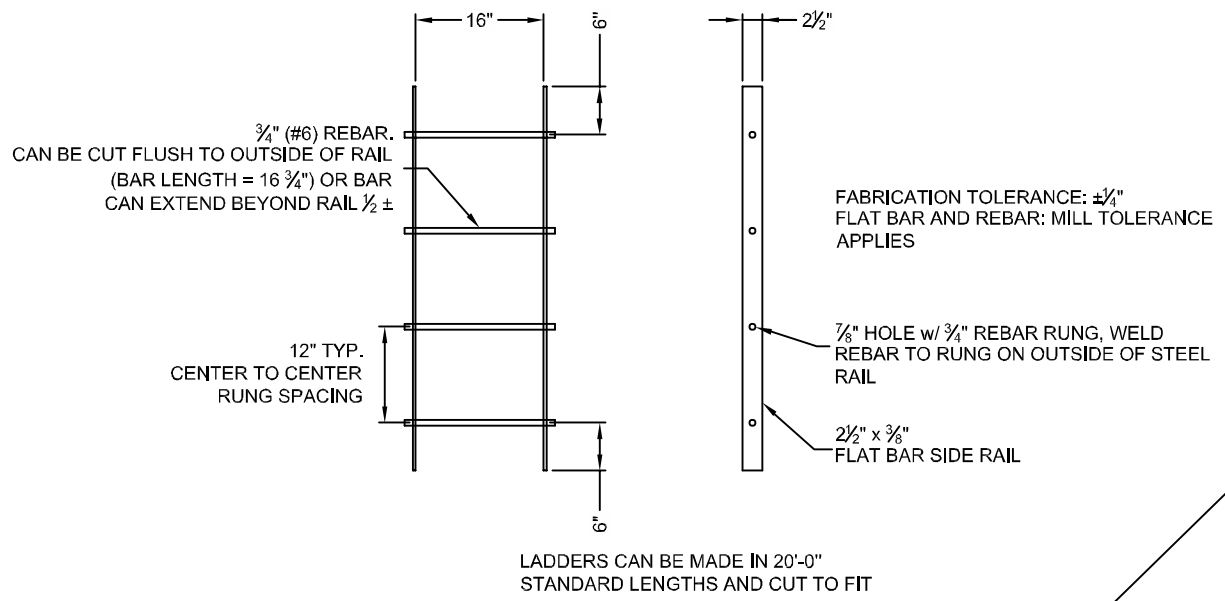
CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
11835 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

CONTECH® CMP DETENTION SYSTEMS
CONTECH FABRICATION DRAWING

Ø60" UNDERGROUND RETENTION SYSTEM - 473876-010
RIVERSIDE COMMUNITY HOSPITAL- PARKING GARAGE ADD
RIVERSIDE, CA
SITE DESIGNATION: NOTE 16, SHEET C-501

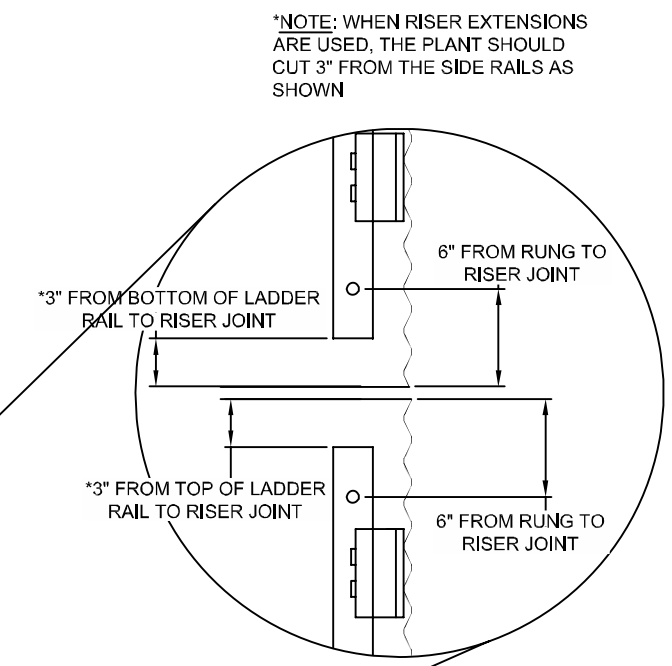
PROJECT No.: 473876	SEQ. No.: 010	DATE: 4/3/2013
DESIGNED: GM	DRAWN: FCS	
CHECKED:	APPROVED:	
SHEET NO.: F2 OF 7		

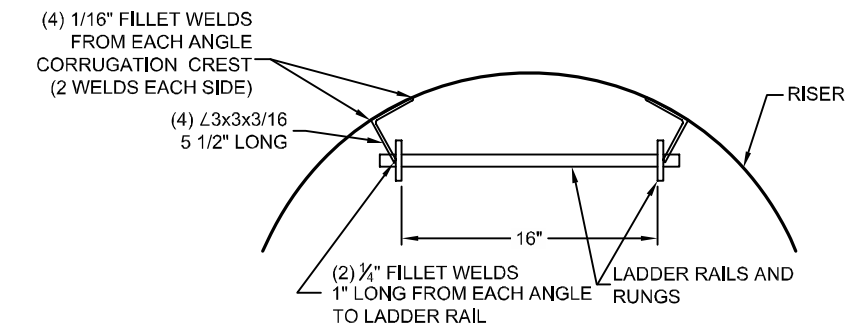
\\AD.CONTECH-CPI.COM\ROOT\WERLIN\PROJECT\ACTIVE\473800\473876\473876-10-CMP_DETENTION\DRAWINGS\CONTRACT\PRE-473876-010-CMP-CON-B.DWG 4/19/2013 4:54 PM



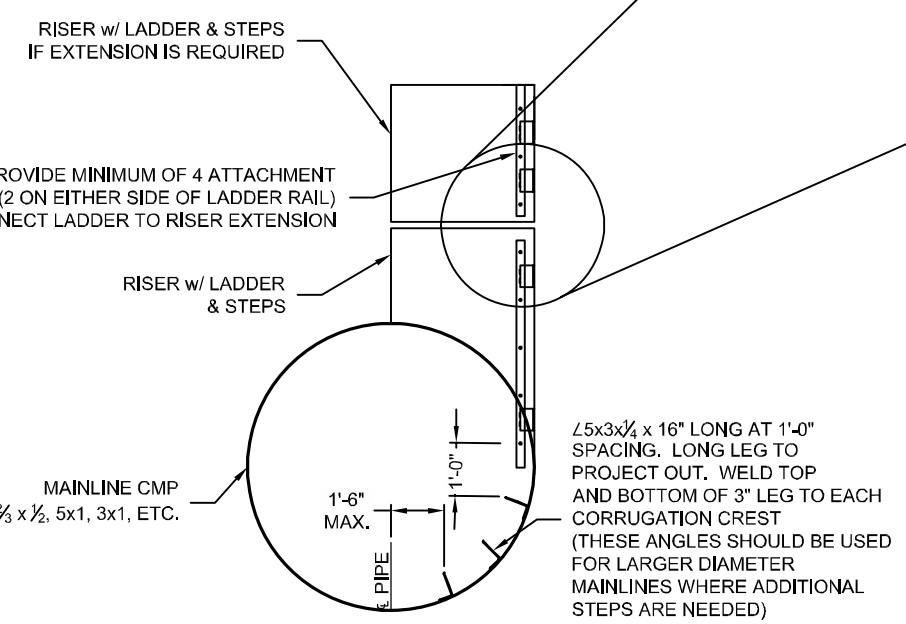
STANDARD LADDER DETAIL

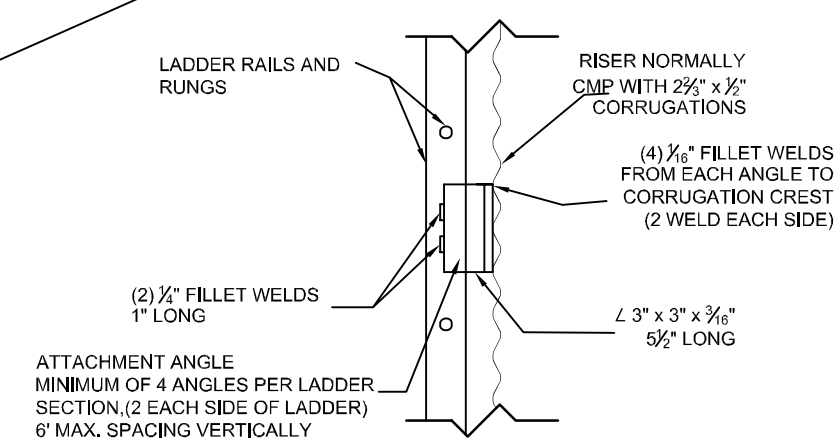
SCALE : N.T.S.



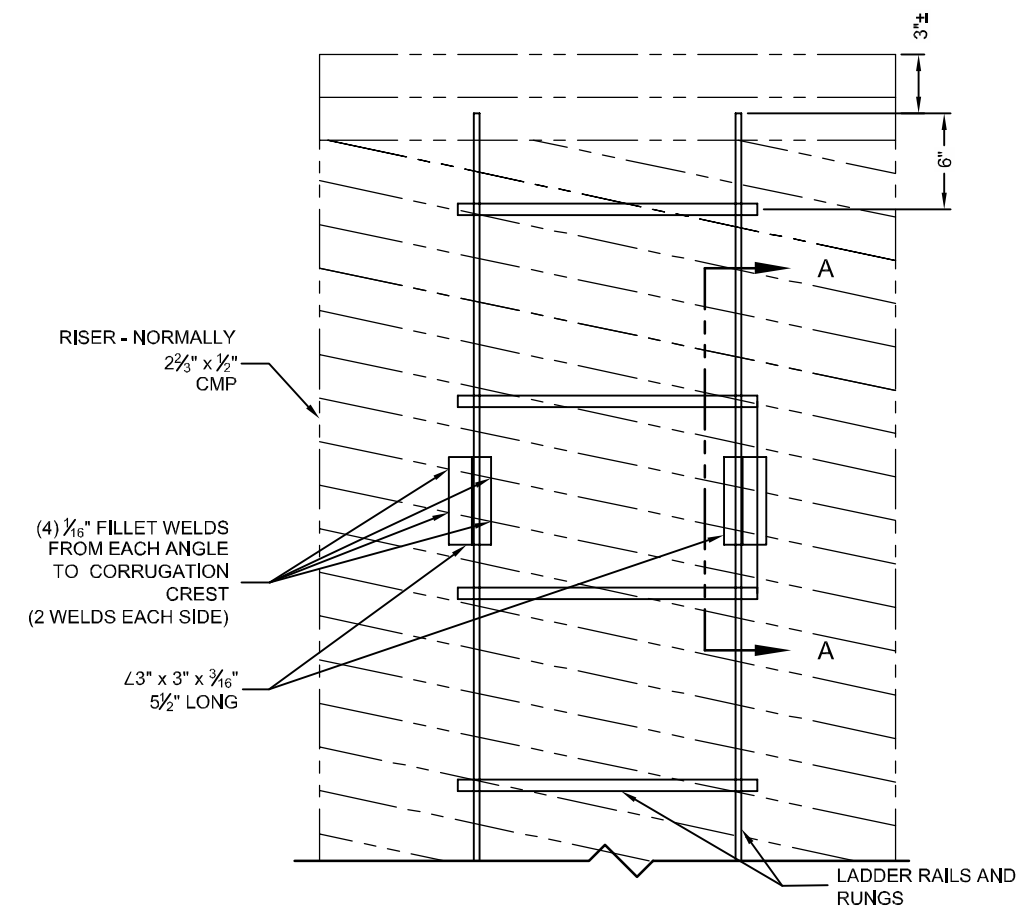


PLAN





SECTION A-A



ELEVATION

1 / F3 RISER LADDER DETAIL

SCALE: N.T.S.

NOTE:
THIS DRAWING IS INTENDED TO APPLY TO LADDERS INSTALLED IN RISERS HAVING A DIAMETER OF 30" OR LARGER. DUE TO SPACE CONSTRAINTS AND LIMITED ACCESSIBILITY, THE PRACTICALLY AND SUITABILITY OF UTILIZING RISERS SMALLER THAN 30" DIAMETER AND/OR INCORPORATING LADDERS IN THESE SMALLER DIAMETER RISERS SHOULD BE ADDRESSED BY THE OWNER AND PROJECT ENGINEER.

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MARK	DATE	REVISION DESCRIPTION	BY
1	4/19/13	REVISED LENGTH & INVERT OF SYSTEM	FCS

CONTECH® ENGINEERED SOLUTIONS LLC
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CONTECH FABRICATION DRAWING

Ø60" UNDERGROUND RETENTION SYSTEM - 473876-010
RIVERSIDE COMMUNITY HOSPITAL- PARKING GARAGE ADD
RIVERSIDE, CA
SITE DESIGNATION: NOTE 16, SHEET C-501

PROJECT No.: 473876	SEQ. No.: 010	DATE: 4/3/2013
DESIGNED: GM	DRAWN: FCS	
CHECKED:	APPROVED:	
SHEET NO.: F3 OF 7		

\\AD.CONTECH-CPI.COM\ROOTWER\LIN\PROJECT\ACTIVE\473800\473876\473876-10-CMP_DETENTION\DRAWINGS\CONTRACT\PRE-473876-010-CMP-CON-B.DWG 4/19/2013 4:54 PM

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Latitude: 33.9765
Longitude: -117.3829

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

			Drainage Area Data					SCS / TR-55 Graphical Peak Discharge Method Runoff Volume and Peak Flow Calculations for Type I, 24-hour Storm Event													
Storm Event	Outfall #	Scenario	Total Area (ac.)	Impv. Area (ac.) CN = 98	Pervious Area (ac.) CN = 56	Curve Number (CN)	Time of Conc. (min)	S (in)	Ia (in)	Ia/P	qu (csm/in)	Table F-1 C_0	Table F-1 C_1	Table F-1 C_2	Rainfall Depth P (in)	Runoff Depth Q (in)	Runoff Volume V (cu ft)	Δ Runoff Volume	Peak Flow q (cfs)	Δ Peak Flow
2-year	1	Predevelopment	14.36	10.83	3.53	88	13.3	1.407	0.281	0.157	358.4	2.2655	-0.5084	-0.1014	1.79	0.78	40,691		6.28	
2-year	1	Post-development Phase 1	14.36	10.98	3.38	88	13.3	1.348	0.270	0.151	362.2	2.2704	-0.5091	-0.1034	1.79	0.81	41,993	3.2%	6.55	4.3%
2-year	1	Post-development Phase 2	14.36	10.98	3.38	88	13.3	1.348	0.270	0.151	362.2	2.2704	-0.5091	-0.1034	1.79	0.81	41,993	3.2%	6.55	4.3%
10-year	1	Predevelopment	14.36	10.83	3.53	88	13.3	1.407	0.281	0.099	390.3	2.3055	-0.5143	-0.1175	2.85	1.66	86,505		14.53	
10-year	1	Post-development Phase 1	14.36	10.98	3.38	88	13.3	1.348	0.270	0.095	390.3	2.3055	-0.5143	-0.1175	2.85	1.69	88,326	2.1%	14.84	2.1%
10-year	1	Post-development Phase 2	14.36	10.98	3.38	88	13.3	1.348	0.270	0.095	390.3	2.3055	-0.5143	-0.1175	2.85	1.69	88,326	2.1%	14.84	2.1%
100-year	1	Predevelopment	14.36	10.83	3.53	88	13.3	1.407	0.281	0.062	390.3	2.3055	-0.5143	-0.1175	4.51	3.17	165,379		27.78	
100-year	1	Post-development Phase 1	14.36	10.98	3.38	88	13.3	1.348	0.270	0.060	390.3	2.3055	-0.5143	-0.1175	4.51	3.22	167,678	1.4%	28.17	1.4%
100-year	1	Post-development Phase 2	14.36	10.98	3.38	88	13.3	1.348	0.270	0.060	390.3	2.3055	-0.5143	-0.1175	4.51	3.22	167,678	1.4%	28.17	1.4%
2-year	2	Predevelopment	3.81	3.33	0.47	93	5.0	0.779	0.156	0.087	529.3	2.3055	-0.5143	-0.1175	1.79	1.11	15,297		3.48	
2-year	2	Post-development Phase 1	3.81	3.33	0.47	93	5.0	0.779	0.156	0.087	529.3	2.3055	-0.5143	-0.1175	1.79	1.11	15,297	0.0%	3.48	0.0%
2-year	2	Post-development Phase 2	3.81	2.49	1.31	84	5.0	1.973	0.395	0.220	453.5	2.2141	-0.4963	-0.0799	1.79	0.58	7,987	-47.8%	1.56	-55.3%
10-year	2	Predevelopment	3.81	3.33	0.47	93	5.0	0.779	0.156	0.055	529.3	2.3055	-0.5143	-0.1175	2.85	2.09	28,885		6.58	
10-year	2	Post-development Phase 1	3.81	3.33	0.47	93	5.0	0.779	0.156	0.055	529.3	2.3055	-0.5143	-0.1175	2.85	2.09	28,885	0.0%	6.58	0.0%
10-year	2	Post-development Phase 2	3.81	2.49	1.31	84	5.0	1.973	0.395	0.138	507.3	2.2789	-0.5103	-0.1068	2.85	1.36	18,811	-34.9%	4.11	-37.6%
100-year	2	Predevelopment	3.81	3.33	0.47	93	5.0	0.779	0.156	0.035	529.3	2.3055	-0.5143	-0.1175	4.51	3.69	51,043		11.63	
100-year	2	Post-development Phase 1	3.81	3.33	0.47	93	5.0	0.779	0.156	0.035	529.3	2.3055	-0.5143	-0.1175	4.51	3.69	51,043	0.0%	11.63	0.0%
100-year	2	Post-development Phase 2	3.81	2.49	1.31	84	5.0	1.973	0.395	0.088	529.3	2.3055	-0.5143	-0.1175	4.51	2.78	38,437	-24.7%	8.76	-24.7%
2-year	3	All Phases (No Changes Expected)	3.51	2.96	0.56	91	5.0	0.948	0.190	0.106	526.3	2.3020	-0.5138	-0.1161	1.79	1.00	12,819		2.90	
10-year	3	All Phases (No Changes Expected)	3.51	2.96	0.56	91	5.0	0.948	0.190	0.067	529.3	2.3055	-0.5143	-0.1175	2.85	1.96	25,019		5.70	
100-year	3	All Phases (No Changes Expected)	3.51	2.96	0.56	91	5.0	0.948	0.190	0.042	529.3	2.3055	-0.5143	-0.1175	4.51	3.54	45,193		10.30	
2-year	4	All Phases (No Changes Expected)	0.46	0.02	0.43	58	5.0	7.176	1.435	0.802	56.7	1.6789	-0.0693	0.0000	1.79	0.02	28		0.00	
10-year	4	All Phases (No Changes Expected)	0.46	0.02	0.43	58	5.0	7.176	1.435	0.504	56.7	1.6789	-0.0693	0.0000	2.85	0.23	386		0.01	
100-year	4	All Phases (No Changes Expected)	0.46	0.02	0.43	58	5.0	7.176	1.435	0.318	339.0	2.0691	-0.4392	-0.0110	4.51	0.92	1,527		0.22	
2-year	5	All Phases (No Changes Expected)	2.82	2.32	0.49	91	5.0	1.031	0.206	0.115	520.5	2.2950	-0.5127	-0.1133	1.79	0.96	9,811		2.20	
10-year	5	All Phases (No Changes Expected)	2.82	2.32	0.49	91	5.0	1.031	0.206	0.072	529.3	2.3055	-0.5143	-0.1175	2.85	1.90	19,451		4.43	
100-year	5	All Phases (No Changes Expected)	2.82	2.32	0.49	91	5.0	1.031	0.206	0.046	529.3	2.3055	-0.5143	-0.1175	4.51	3.47	35,506		8.09	

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

BMP Name	Check One		If not applicable, state brief reason
	Included	Not Applicable	
Non-Structural Source Control BMPs			
Education for Property Owners, Operators, Tenants, Occupants, or Employees	X		
Activity Restrictions	X		
Irrigation System and Landscape Maintenance	X		
Common Area Litter Control	X		
Street Sweeping Private Streets and Parking Lots	X		
Drainage Facility Inspection and Maintenance	X		
Structural Source Control BMPs			
MS4 Stenciling and Signage	X		
Landscape and Irrigation System Design	X		
Protect Slopes and Channels		X	No significant slopes or channels in development area
Provide Community Car Wash Racks		X	Not present on-site
Properly Design:			
Fueling Areas		X	Not present on-site
Air/Water Supply Area Drainage		X	Not present on-site
Trash Storage Areas	X		
Loading Docks		X	Not present on-site
Maintenance Bays		X	Not present on-site
Vehicle and Equipment Wash Areas		X	Not present on-site
Outdoor Material Storage Areas		X	Not present on-site
Outdoor Work Areas or Processing Areas		X	Not present on-site
Provide Wash Water Controls for Food Preparation Areas		X	Not present on-site

MS4 stenciling and signage will be performed during construction and maintained annually by the owner. The landscape and irrigation system is efficient and drought tolerant. The owner will inspect the sprinkler system quarterly to verify that the sprinkler heads remain directed at landscape areas to limit runoff.

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms

The start-up date for maintenance activities will be at the close-out of construction.
HCA shall be responsible for maintenance:
4445 Magnolia Avenue
Riverside, CA 925001
Telephone: 951-788-3151

BMP	Frequency	Maintenance Activities
Catch Basin Stenciling	**Annually**	**Inspect.**
Drainage System	**Monthly**	**Inspect catch basins for debris and clogging. Remove and dispose of contents as yard waste as necessary.**
Litter Control	**Daily**	**Empty trash receptacles and clean trash in plaza area.**
Underground Infiltration Pipes	**Quarterly**	**Inspect the top of the gravel layer. Remove lingering sediments at the top of the gravel layer. Dispose contents as trash.**
	After Large Storms (1" or greater)	**Inspect for stagnant ponding. If ponding is stagnant for more than 72 hours after the end of a storm event, test the unit infiltration rates once stagnant water is removed and replace the clogged portion of the underlying gravel. Replace areas with less than 0.5 inches per hour of hydraulic conductivity.**

WHEN RECORDED MAIL TO:

City Clerk
City of Riverside
City Hall, 3900 Main Street
Riverside, CA 92522

Planning Case: P12-0643, P12-0688

DOC # 2013-0156030
04/02/2013 11:28A Fee:NC
Page 1 of 9
Recorded in Official Records
County of Riverside
Larry W. Ward
Assessor, County Clerk & Recorder

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For Recorder's Office Use Only

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COVENANT AND AGREEMENT ESTABLISHING NOTIFICATION PROCESS AND RESPONSIBILITY FOR WATER QUALITY MANAGEMENT PLAN IMPLEMENTATION AND MAINTENANCE

THIS COVENANT AND AGREEMENT FOR WATER QUALITY MANAGEMENT PLAN IMPLEMENTATION AND MAINTENANCE is made and entered into this 11th day of February, 2013, by Riverside Healthcare System, L.P., a California limited partnership, ("Declarant"), with reference to the following facts:

A. Declarant is the fee owner of the real property (the "Property") situated in the City of Riverside, County of Riverside, State of California, and legally described in Exhibit "A", which is attached hereto and incorporated within by reference.

B. Declarant has applied to the City of Riverside ("City") up to 60,000 square foot medical office building and 1,060 stall parking structure.

C. As a condition of approval and prior to the map recordation and/or issuance of any permits, the City is requiring Declarant to execute and record an agreement stating that the future property owners shall be informed of the requirements to implement and maintain the Best Management Practices ("BMPs") as described in the approved project specific Water Quality Management Plan.

D. Declarant intends by this document to comply with the conditions imposed by the City and to impose upon the Property mutually beneficial restrictions, conditions, covenants and agreements for the benefit of Property.

NOW, THEREFORE, for the purposes of complying with the conditions imposed by the City of Riverside for the approval of Planning Case P12-0643 P12-0688 Declarant hereby declares that the Property is and hereafter shall be held, conveyed, transferred, mortgaged, encumbered, leased, rented, used, occupied, sold and improved subject to the following declarations, limitations, covenants, conditions, restrictions and easements, all of which are imposed as

equitable servitudes pursuant to a general plan for the development of the Property for the purpose of enhancing and protecting the value and attractiveness of the Property, and each Parcel thereof, in accordance with the plan for the improvement of the Property, and to comply with certain conditions imposed by the City for the approval of P$\frac{\text{P12-0643}}{\text{P12-0688}}$ and shall be binding and inure to the benefit of each successor and assignee in interest of each such party. Any conveyance, transfer, sale, assignment, lease or sublease made by Declarant of a Parcel of the Property shall be and hereby is deemed to incorporate by reference all the provisions of the Covenant and Agreement including, but not limited to, all the covenants, conditions, restrictions, limitations, grants of easement, rights, rights-of-way, and equitable servitude contained herein.

1. This Covenant and Agreement hereby establishes a notification process for future individual property owners to ensure they are subject to and adhere to the Water Quality Management Plan implementation measures and that it shall be the responsibility of the Declarant, its heirs, successors and assigns to implement and maintain all Best Management Practices (BMPs) in good working order.

2. Declarant shall use its best efforts to diligently implement and maintain all BMPs in a manner assuring peak performance at all times. All reasonable precautions shall be exercised by Declarant, its heirs, successors and assigns, in the removal and extraction of any material(s) from the BMPs and the ultimate disposal of the material(s) in a manner consistent with all relevant laws and regulations in effect at the time. As may be requested from time to time by the City, Declarant, its heirs, successors and assigns shall provide the City with documentation identifying the material(s) removed, the quantity, and disposal destination.

3. In the event Declarant, or its heirs, successors or assigns, fails to undertake the maintenance contemplated by this Covenant and Agreement within twenty-one (21) days of being given written notice by the City, or fails to complete any maintenance contemplated by this Covenant and Agreement with reasonable diligence, the City is hereby authorized to cause any maintenance necessary to be completed and charge the entire cost and expense to the Declarant or Declarant's successors or assigns, including administrative costs, reasonable attorneys fees and interest thereon at the maximum rate authorized by the Civil Code from the date of the notice of expense until paid in full. As an additional remedy, the Public Works Director may withdraw any previous urban runoff-related approval with respect to the Property on which BMPs have been installed and/or implemented until such time as Declarant, its heirs, successors or assigns, repays to City its reasonable costs incurred in accordance with this paragraph.

4. Any person who now or hereafter owns or acquires any right, title or interest in or to any parcel of the Property shall be deemed to have consented and agreed to every covenant, condition, restriction and easement contained herein.

5. In addition, each of the provisions hereof shall operate as covenants running with the land for the benefit of the Property and each Parcel thereof and shall inure to the benefit of all owners of the Parcels thereof, their successors and assigns in interest, and shall apply to and bind each successive owner of each Parcel, their successors and assigns in interest.

6. The terms of this Covenant and Agreement may be enforced by the City, its successors or assigns, and by any owner, lessee or tenant of the Parcels of the Property. Should the City or any owner, lessee or tenant bring an action to enforce any of the terms of this Covenant and Agreement, the prevailing party shall be entitled to costs of suit including reasonable attorneys' fees.

7. Subject to the prior written approval of the City by its Public Works Director, any provision contained herein may be terminated, modified or amended as to all of the Property or any portion thereof. No such termination, modification or amendment shall be effective until there shall have been executed, acknowledged and recorded in the Office of the Recorder of Riverside County, California, an appropriate instrument evidencing the same including the consent thereto by the City.

IN WITNESS WHEREOF, Declarant has caused this Covenant and Agreement to be executed as of the day and year first written above.

Riverside Healthcare System, L.P., a California limited partnership

By: Columbia Riverside, Inc., a California corporation

Name: Nicholas L. Paul
Title: Vice President

Name:
Title:

APPROVED AS TO FORM:

Name: Kristi J. Smith
Deputy City Attorney

APPROVED AS TO CONTENT

Name: Kevin Marstall
Public Works Department:

STATE OF TN)
)
COUNTY OF Davidson)

On Feb. 11, 2013, before me, George R Woods Jr., Notary Public, personally appeared Nicholas L. Paul, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Tennessee that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____ (SEAL)
Notary Public Signature

GEORGE R WOODS JR
STATE OF TENNESSEE NOTARY PUBLIC
COUNTY OF WILLIAMSON

STATE OF)
)
COUNTY OF)

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of _____ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____ (SEAL)
Notary Public Signature

EXHIBIT "A"
LEGAL DESCRIPTION
W.Q.M.P.

THE LAND REFERRED TO HEREIN IS SITUATED IN THE CITY OF RIVERSIDE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BEING PARCEL 1 OF LOT LINE ADJUSTMENT NO. 021-12 RECORDED MARCH 27, 2002 AS INSTRUMENT NO. 2002-153870, PARCEL 4, AND PORTIONS OF PARCELS 7 AND 8 CERTIFICATE OF COMPLIANCE FOR LOT LINE ADJUSTMENT, RECORDED MAY 16, 1986 AS INSTRUMENT NO. 114520, ALL OFFICIAL RECORDS OF THE COUNTY RECORDER OF SAID COUNTY, WHICH IS FURTHER DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST EASTERLY CORNER OF SAID PARCEL 1 OF LOT LINE ADJUSTMENT NO. 021-12; THENCE ALONG THE SOUTHEASTERLY LINE OF SAID PARCEL 1 AND PARCEL 4 SOUTH 29°43'13" WEST 360.62 FEET; THENCE ALONG THE VARIOUS LINES OF SAID PARCELS 1, 4, 7, AND 8, THE FOLLOWING SEVENTEEN (17) COURSES:

THENCE NORTH 60° 16' 46" WEST, 189.04 FEET;

THENCE SOUTH 29° 43' 13" WEST, 25.30 FEET;

THENCE NORTH 60° 16' 46" WEST, 63.01 FEET;

THENCE SOUTH 48° 25' 41" WEST, 66.22 FEET;

THENCE NORTH 60° 16' 46" WEST, 84.47 FEET;

THENCE SOUTH 29° 43' 14" WEST, 249.75 FEET;

THENCE SOUTH 60° 16' 46" EAST, 112.00 FEET;

THENCE NORTH 29° 43' 14" EAST, 54.28 FEET;

THENCE SOUTH 60° 16' 46" EAST, 87.39 FEET;

THENCE SOUTH 51° 43' 01" WEST, 47.75 FEET;

THENCE SOUTH 66° 15' 40" WEST, 66.56 FEET;

THENCE SOUTH 30° 12' 09" WEST, 248.71 FEET;

THENCE SOUTH 60° 08' 46" EAST, 55.06 FEET;

THENCE SOUTH 64° 30' 14" WEST, 4.19 FEET;

THENCE NORTH 60° 18' 00" WEST, 141.54 FEET;

THENCE NORTH 58° 00' 36" WEST, 50.04 FEET;

THENCE NORTH 60° 17' 55" WEST, 24.50 FEET;

THENCE SOUTH 29° 34' 37" WEST, 0.31 FEET TO THE NORTHEASTERLY LINE OF PARCEL "A" AS DESCRIBED IN ROAD EASEMENT TO THE CITY OF RIVERSIDE, RECORDED 4/5/96 AS INSTRUMENT NO. 124329, OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA;

THENCE NORTH 60° 18' 30" WEST, ALONG SAID NORTHEASTERLY LINE OF SAID PARCEL "A" 237.45 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHEASTERLY HAVING A RADIUS OF 475.50 FEET;

THENCE NORTHWESTERLY ALONG SAID NORTHEASTERLY LINE AND THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 17° 29' 27", AN ARC LENGTH OF 145.16 FEET TO THE SOUTHEASTERLY LINE OF PARCEL "B" OF SAID ROAD EASEMENT;

THENCE NORTH 47° 12' 07" EAST ALONG SAID SOUTHEASTERLY LINE, 9.49 FEET;

THENCE NORTH 08° 08' 53" EAST ALONG SAID SOUTHEASTERLY LINE, 30.18 FEET TO THE EASTERLY LINE OF BROCKTON AVENUE;

THENCE ALONG THE VARIOUS LINES OF SAID PARCELS 1, 7, AND 8, THE FOLLOWING TEN (10) COURSES;

THENCE NORTH 48° 25' 41" EAST, 485.60 FEET;

THENCE SOUTH 60° 16' 46" EAST, 151.06 FEET;

THENCE NORTH 48° 25' 41" EAST, 494.79 FEET;

THENCE SOUTH 60° 16' 47" EAST, 47.01 FEET;

THENCE SOUTH 29° 43' 13" WEST, 145.00 FEET;

THENCE SOUTH 60° 16' 46" EAST, 125.00 FEET;

THENCE NORTH 29° 43' 14" EAST, 145.00 FEET;

THENCE SOUTH 60° 16' 47" EAST, 80.00 FEET;

THENCE NORTH 29° 35' 56" EAST, 5.00 FEET;

THENCE SOUTH 60° 16' 46" EAST, 52.46 FEET TO THE **POINT OF BEGINNING**.

THE ABOVE DESCRIBED PARCEL OF LAND CONTAINS 8.15 ACRES, MORE OR LESS.

PETER E. WEILBACHER, PLS

DATE: 3-11-13

LICENSED LAND SURVEYOR
PETER EDWARD WEILBACHER
Exp. 06/30/14
NO. 8403
STATE OF CALIFORNIA

DESCRIPTION APPROVAL:

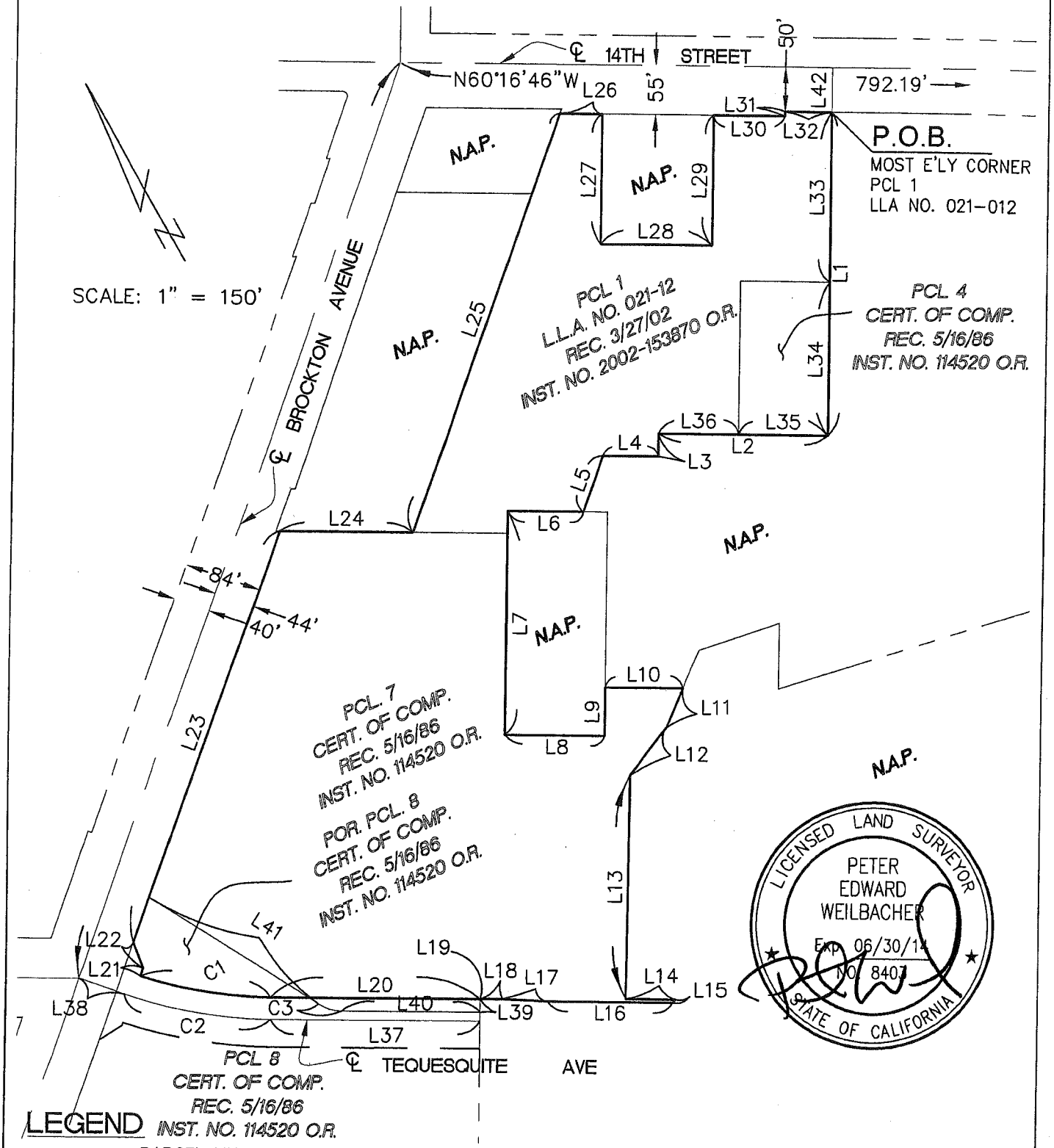
BY: 3/18/13
DATE

FOR: CURTIS C. STEPHENS, L.S. 7519
CITY SURVEYOR

DATE: 02/25/13

EXHIBIT "B"

SHEET 4 OF 5



LEGEND

PARCEL LINE

STREET CENTERLINE

P.O.B. POINT OF BEGINNING

T.P.O.B. TRUE POINT OF BEGINNING

SEE SHEET 4 OF 4 FOR LINE AND TABLE DATA

JN 12-053

CANYON
CONSULTING
PLANNING • ENGINEERING • SURVEYING
11860 PIERCE STREET, SUITE 200, RIVERSIDE, CA 92505
951/343-8686 VOICE, 951/343-8831 FAX

PLAT TO ACCOMPANY LEGAL DESCRIPTION

W.Q.M.P.

LINE TABLE		
LINE	BEARING	LENGTH
L1	N29°43'13"E	360.62'
L2	N60°16'46"W	189.04'
L3	N29°43'13"E	25.30'
L4	N60°16'46"W	63.01'
L5	N48°25'41"E	66.22'
L6	N60°16'46"W	84.47'
L7	N29°43'14"E	249.75'
L8	N60°16'46"W	112.00'
L9	N29°43'14"E	54.28'
L10	N60°16'46"W	87.39'
L11	N51°43'01"E	47.75'
L12	N66°15'40"E	66.56'
L13	N30°12'09"E	248.71'
L14	N60°08'46"W	55.06'
L15	N64°30'14"E	4.19'
L16	N60°18'00"W	141.54'
L17	N58°00'36"W	50.04'
L18	N60°17'55"W	24.50'
L19	N29°34'37"E	0.31'
L20	N60°18'30"W	237.45'
L21	N47°12'07"E	9.49'
L22	N08°08'53"E	30.18'
L23	N48°25'41"E	485.60'
L24	N60°16'46"W	151.06'
L25	N48°25'41"E	494.79'
L26	N60°16'47"W	47.01'
L27	N29°43'13"E	145.00'
L28	N60°16'46"W	125.00'
L29	N29°43'14"E	145.00'
L30	N60°16'47"W	80.00'
L31	N29°35'56"E	5.00'
L32	N60°16'46"W	52.46'
L33	N29°43'13"E	189.46'
L34	N29°43'13"E	171.16'
L35	N60°16'46"W	100.00'
L36	N60°16'46"W	89.04'
L37	N60°18'30"W	237.16'
L38	N41°34'19"W	44.00'
L39	N29°34'37"E	15.00'
L40	N60°18'00"W	157.18'
L41	N28°34'22"W	221.24'
L42	N29°43'14"E	50.00'

CURVE DATA			
CURVE	RADIUS	DELTA	LENGTH
C1	475.50'	17°29'27"	145.16'
C2	500.00'	18°44'11"	163.51'
C3	50.00'	31°43'38"	27.69'

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PLAT TO ACCOMPANY LEGAL DESCRIPTION

W.Q.M.P.

This must be in red to be a
"CERTIFIED COPY"

I hereby certify the foregoing instrument to which this stamp has been affixed consisting of 9 pages to be a full, true and correct copy of the original on file and of record in my office.

Larry W Ward

Assessor - County Clerk - Recorder

County of Riverside, State of California

APR 02 2013

Dated:

Certification must be in red to be a
"CERTIFIED COPY"

ASSESSOR · COUNTY CLERK · RECORDER
ACR
RIVERSIDE COUNTY, CALIFORNIA

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines, and Other End-User BMP Information

Appendix D –Educational Material

Table of Contents

Underground Detention Maintenance Guide

CDS Unit Maintenance Guide

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Infiltration Basin TC-11

Monitoring, Reporting, and Program Evaluation

Maintenance

Underground storm water detention and retention systems should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size or configuration of the system.

Inspection

Inspection is the key to effective maintenance and is easily performed. CONTECH recommends ongoing quarterly inspections of the accumulated sediment. Sediment deposition and transport may vary from year to year and quarterly inspections will help insure that systems are cleaned out at the appropriate time. Inspections should be performed more often in the winter months in climates where sanding operations may lead to rapid accumulations, or in equipment washdown areas. It is very useful to keep a record of each inspection. A sample inspection log is included for your use.

Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice. CONTECH suggests that all systems be designed with an access/inspection manhole situated at or near the inlet and the outlet orifice. Should it be necessary to get inside the system to perform maintenance activities, all appropriate precautions regarding confined space entry and OSHA regulations should be followed.

Cleaning

Maintaining an underground detention or retention system is easiest when there is no flow entering the system. For this reason, it is a good idea to schedule the cleanout during dry weather.

Accumulated sediment and trash can typically be evacuated through the manhole over the outlet orifice. If maintenance is not performed as recommended, sediment and trash may accumulate in front of the outlet orifice. Manhole covers should be securely seated following cleaning activities.

CONTECH® STORMWATER SOLUTIONS™

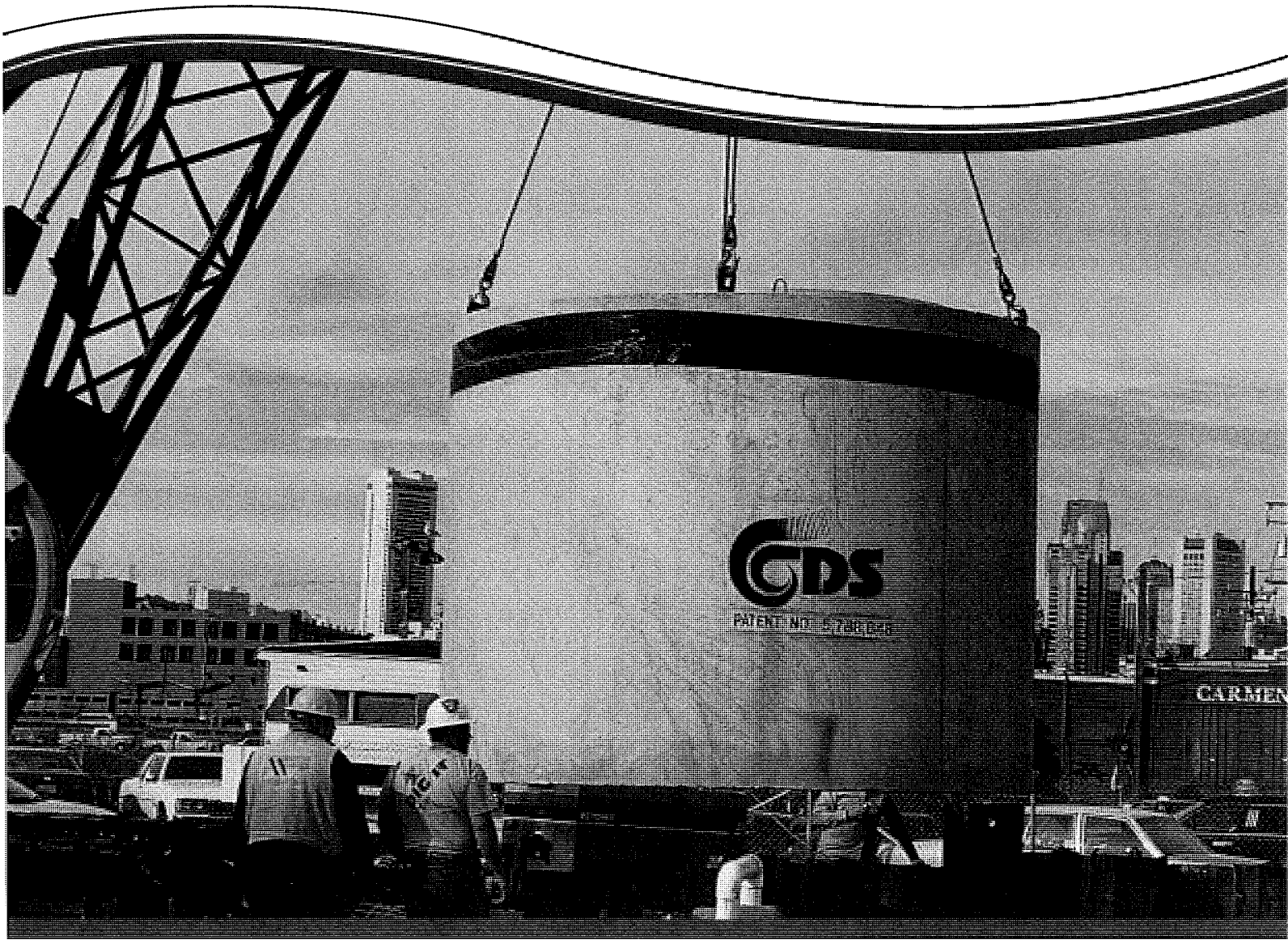
Inspection & Maintenance Log

___" Diameter System			Location: Anywhere, USA		
Date	**Depth of Sediment**	**Accumulated Trash**	**Maintenance Performed**	**Maintenance Personnel**	**Comments**
12/01/99	2"	None	Removed Sediment	B. Johnson	Installed
03/01/00	1"	Some	Removed Sediment and Trash	B. Johnson	Swept parking lot
06/01/00	0"	None	None		
09/01/00	0"	Heavy	Removed Trash	S. Riley	
12/01/00	1"	None	Removed Sediment	S. Riley	
4/01/01	0"	None	None	S. Riley	
04/15/01	2"	Some	Removed Sediment and Trash	ACE Environmental Services	

SAMPLE

CONTECH®
CONSTRUCTION PRODUCTS INC.

CDS Guide
Operation, Design, Performance and Maintenance



CDS®

Using patented continuous deflective separation technology, the CDS system screens, separates and traps debris, sediment, and oil and grease from stormwater runoff. The indirect screening capability of the system allows for 100% removal of floatables and neutrally buoyant material without blinding. Flow and screening controls physically separate captured solids, and minimize the re-suspension and release of previously trapped pollutants. Inline units can treat up to 6 cfs, and internally bypass flows in excess of 50 cfs. Available precast or cast-in-place, offline units can treat flows from 1 to 300 cfs. The pollutant removal capacity of the CDS system has been proven in lab and field testing.

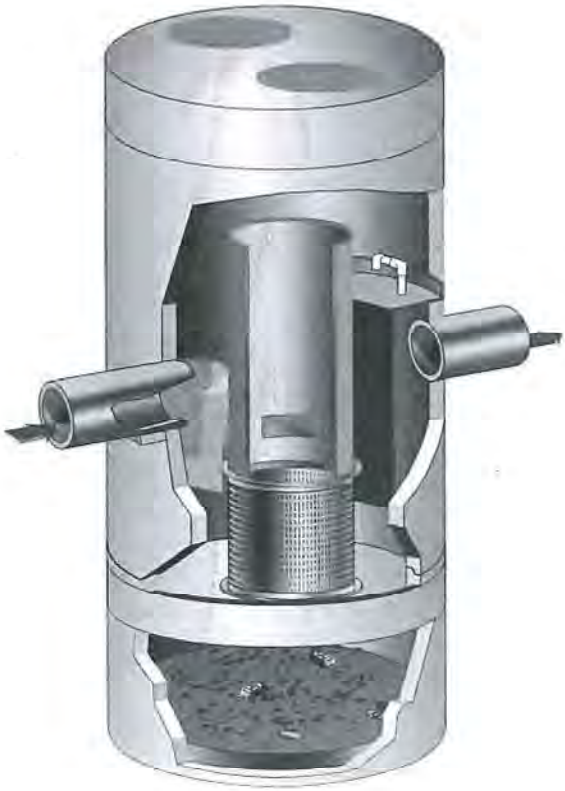
Operation Overview

Stormwater enters the diversion chamber where the diversion weir guides the flow into the unit's separation chamber and pollutants are removed from the flow. All flows up to the system's treatment design capacity enter the separation chamber and are treated.

Swirl concentration and screen deflection force floatables and solids to the center of the separation chamber where 100% of floatables and neutrally buoyant debris larger than the screen apertures are trapped.

Stormwater then moves through the separation screen, under the oil baffle and exits the system. The separation screen remains clog free due to continuous deflection.

During the flow events exceeding the design capacity, the diversion weir bypasses excessive flows around the separation chamber, so captured pollutants are retained in the separation cylinder.



Design Basics

There are three primary methods of sizing a CDS system. The Water Quality Flow Rate Method determines which model size provides the desired removal efficiency at a given flow rate for a defined particle size. The Rational Rainfall MethodTM and Probabalistic Method are used when a specific removal efficiency of the net annual sediment load is required.

Typically in the Unites States, CDS systems are designed to achieve an 80% annual solids load reduction based on lab generated performance curves for a gradation with an average particle size (d50) of 125-microns (μm). For some regulatory environments, CDS systems can also be designed to achieve an 80% annual solids load reduction based on an average particle size (d50) of 75-microns (μm).

Water Quality Flow Rate Method

In many cases, regulations require that a specific flow rate, often referred to as the water quality design flow (WQQ), be treated. This WQQ represents the peak flow rate from either an event with a specific recurrence interval (i.e. the six-month storm) or a water quality depth (i.e. 1/2-inch of rainfall).

The CDS is designed to treat all flows up to the WQQ. At influent rates higher than the WQQ, the diversion weir will direct most flow exceeding the treatment flow rate around the separation chamber. This allows removal efficiency to remain relatively constant in the separation chamber and reduces the risk of washout during bypass flows regardless of influent flow rates.

Treatment flow rates are defined as the rate at which the CDS will remove a specific gradation of sediment at a specific removal efficiency. Therefore they are variable based on the gradation and removal efficiency specified by the design engineer.

Rational Rainfall Method™

Differences in local climate, topography and scale make every site hydraulically unique. It is important to take these factors into consideration when estimating the long-term performance of any stormwater treatment system. The Rational Rainfall Method combines site-specific information with laboratory generated performance data, and local historical precipitation records to estimate removal efficiencies as accurately as possible.

Short duration rain gauge records from across the United States and Canada were analyzed to determine the percent of the total annual rainfall that fell at a range of intensities. US stations' depths were totaled every 15 minutes, or hourly, and recorded in 0.01-inch increments. Depths were recorded hourly with 1-mm resolution at Canadian stations. One trend was consistent at all sites; the vast majority of precipitation fell at low intensities and high intensity storms contributed relatively little to the total annual depth.

These intensities, along with the total drainage area and runoff coefficient for each specific site, are translated into flow rates using the Rational Rainfall Method. Since most sites are relatively small and highly impervious, the Rational Rainfall Method is appropriate. Based on the runoff flow rates calculated for each intensity, operating rates within a proposed CDS system are determined. Performance efficiency curve determined from full scale laboratory tests on defined sediment PSDs is applied to

calculate solids removal efficiency. The relative removal efficiency at each operating rate is added to produce a net annual pollutant removal efficiency estimate.

Probabalistic Rational Method

The Probabalistic Rational Method is a sizing program CONTECH developed to estimate a net annual sediment load reduction for a particular CDS model based on site size, site runoff coefficient, regional rainfall intensity distribution, and anticipated pollutant characteristics.

The Probabilistic rational method is an extension of the rational method used to estimate peak discharge rates generated by storm events of varying statistical return frequencies (i.e.: 2-year storm event). Under this method, an adjustment factor is used to adjust the runoff coefficient estimated for the 10-year event, correlating a known hydrologic parameter with the target storm event. The rainfall intensities vary depending on the return frequency of the storm event under consideration. In general, these two frequency dependent parameters increase as the return frequency increases while the drainage area remains constant.

These intensities, along with the total drainage area and runoff coefficient for each specific site, are translated into flow rates using the Rational Method. Since most sites are relatively small and highly impervious, the Rational Method is appropriate. Based on the runoff flow rates calculated for each intensity, operating rates within a proposed CDS are determined. Performance efficiency curve on defined sediment PSDs is applied to calculate solids removal efficiency. The relative removal efficiency at each operating rate is added to produce a net annual pollutant removal efficiency estimate.

Treatment Flow Rate

The inlet throat area is sized to ensure that the WQQ passes through the separation chamber at a water surface elevation equal to the crest of the diversion weir. The diversion weir bypasses excessive flows around the separation chamber, thus helping to prevent re-suspension or re-entrainment of previously captured particles.

Hydraulic Capacity

CDS hydraulic capacity is determined by the length and height of the diversion weir and by the maximum allowable head in the system. Typical configurations allow hydraulic capacities of up to ten times the treatment flow rate. As needed, the crest of the diversion weir may be lowered and the inlet throat may be widened to increase the capacity of the system at a given water surface elevation. The unit is designed to meet project specific hydraulics.

Performance

Full-Scale Laboratory Test Results

A full-scale CDS unit (Model CDS2020-5B) was tested at the facility of University of Florida, Gainesville, FL. This full-scale CDS unit was evaluated under controlled laboratory conditions of pumped influent and the controlled addition of sediment.

Two different gradations of silica sand material (UF Sediment & OK-110) were used in the CDS performance evaluation. The particle size distributions (PSD) of the test materials were analyzed using standard method "Gradation ASTM D-422 with Hydrometer" by a certified laboratory. UF Sediment is a mixture of three different U.S. Silica Sand products referred as: "Sil-Co-Sil 106", "#1 DRY" and "20/40 Oil Frac". Particle size distribution analysis shows that the UF Sediment has a very fine gradation (d50 = 20 to 30 μm) covering a wide size range (uniform coefficient Cu averaged at 10.6). In comparison with the hypothetical TSS gradation specified in the NJDEP (New Jersey Department of Environmental Protection) and NJCAT (New Jersey Corporation for Advanced Technology) protocol for lab testing, the UF Sediment covers a similar range of particle size but with a finer d50 (d50 for NJDEP is approximately 50 μm) (NJDEP, 2003). The OK-110 silica sand is a commercial product of U.S. Silica Sand. The particle size distribution analysis of this material, also included in Figure 1, shows that 99.9% of the OK-110 sand is finer than 250 microns, with a mean particle size (d50) of 106 microns. The PSDs for the test material are shown in Figure 1.

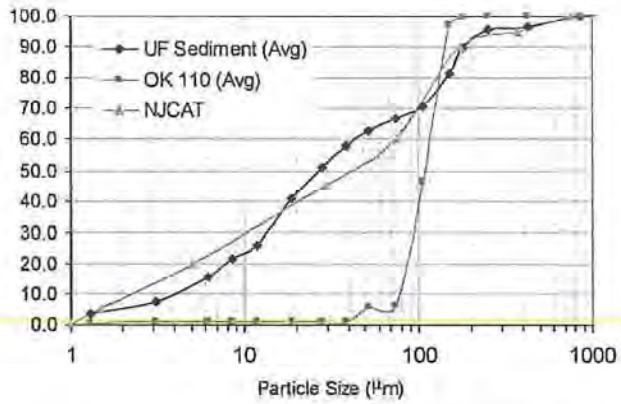


Figure 1. Particle size distributions for the test materials, as compared to the NJCAT/NJDEP theoretical distribution.

Tests were conducted to quantify the CDS unit (1.1 cfs (31.3-L/s) design capacity) performance at various flow rates, ranging from 1% up to 125% of the design capacity of the unit, using the 2400 micron screen. All tests were conducted with controlled influent concentrations approximately 200 mg/L. Effluent samples were taken at equal time intervals across the entire duration of each test run. These samples were then processed with a Dekaport Cone sample splitter to obtain representative sub-samples for Suspended Sediment Concentration (SSC – ASTM Standard Method D3977-97) and particle size distribution analysis.

Results and Modeling

Based on the testing data from the University of Florida, a performance model was developed for the CDS system. A regression analysis was used to develop a fitting curve for the scattered data points at various design flow rates. This model, which demonstrated good agreement with the laboratory data, can then be used to predict CDS system performance with respect to SSC removal for any particle size gradation assuming sandy-silt type of inorganic components of SSC. Figure 2 shows CDS predictive performance for two typical particle size gradations (NJCAT gradation and OK-110 sand).

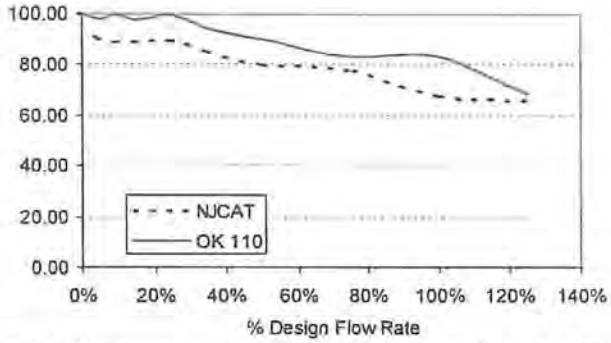


Figure 2. CDS stormwater treatment predictive performance for various particle gradations as a function of operating rate.

Many regulatory jurisdictions set a performance standard for hydrodynamic devices by stating that the devices shall be capable of achieving an 80% removal efficiency for particles having a mean particle size (d50) of 125 microns (WADOE, 2008). The model can be used to calculate the expected performance of such a PSD (shown in Figure 3). Supported by the laboratory data, the model indicates (Figure 4) that the CDS system with 2400 micron screen achieves approximately 80% removal at 100% of design flow rate, for this particle size distribution (d50 = 125 μm).

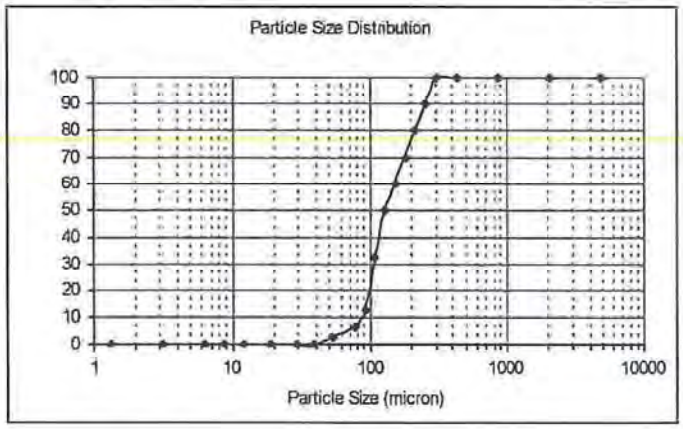


Figure 3. PSD with d50 = 125 microns, used to model performance for Ecology submittal.

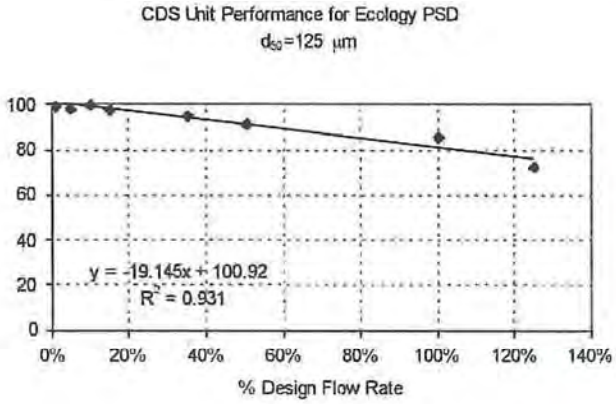


Figure 4. Modeled performance for CDS unit with 2400 microns screen, using Ecology PSD.

Maintenance

The CDS system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit, e.g., unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant deposition and transport may vary from year to year and regular inspections will help insure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (i.e. spring and fall) however more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Additionally, installations should be inspected more frequently where excessive amounts of trash are expected.

The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions to inlet and/or separation screen. The inspection should also identify evidence of vector infestation and accumulations of hydrocarbons, trash, and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If sorbent material is used for enhanced removal of hydrocarbons then the level of discoloration of the sorbent material should also

be identified during inspection. It is useful and often required as part of a permit to keep a record of each inspection. A simple form for doing so is provided.

Access to the CDS unit is typically achieved through two manhole access covers. One opening allows for inspection and cleanout of the separation chamber (screen/cylinder) and isolated sump. The other allows for inspection and cleanout of sediment captured and retained behind the screen. For units possessing a sizable depth below grade (depth to pipe), a single manhole access point would allow both sump cleanout and access behind the screen.

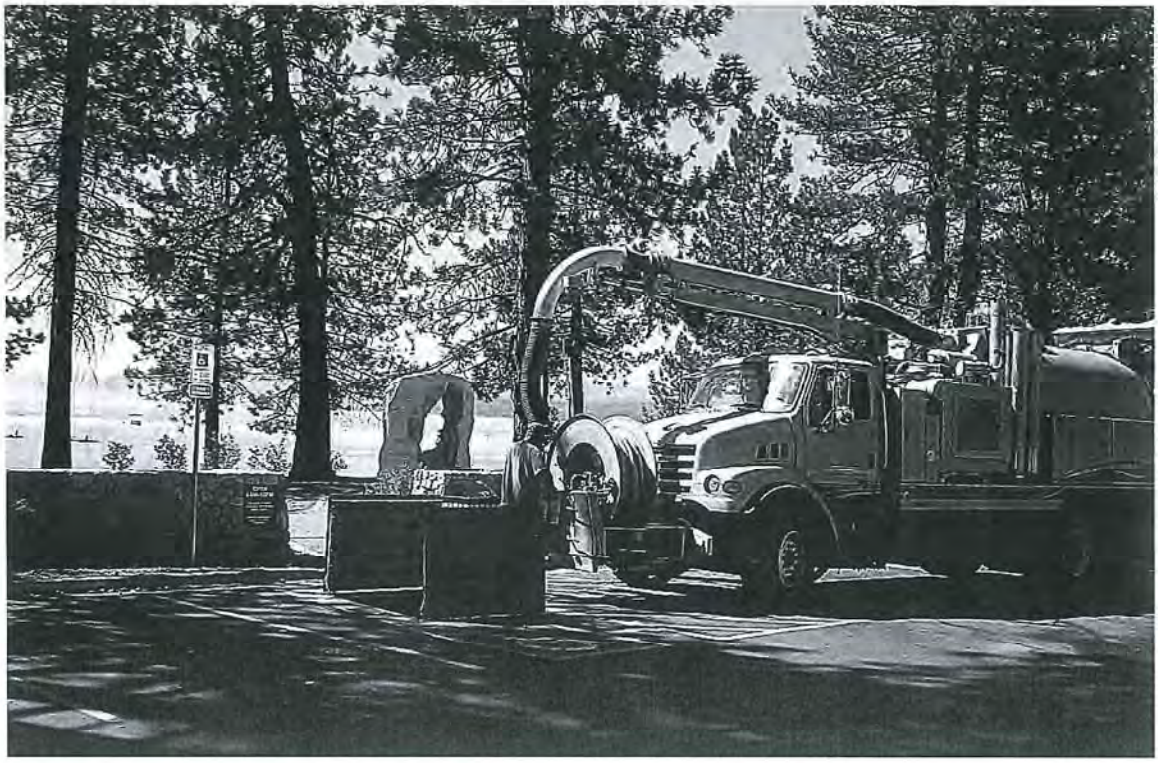
The CDS system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump and/or when an appreciable level of hydrocarbons and trash has accumulated. If sorbent material is used, it should be replaced when significant discoloration has occurred. Performance will not be impacted until 100% of the sump capacity is exceeded however it is recommended that the system be cleaned prior to that for easier removal of sediment. The level of sediment is easily determined by measuring from finished grade down to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Finer, silty particles at the top of the pile typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the as-built drawing for the unit to determine if the height of the sediment pile off the bottom of the sump floor exceeds 75% of the total height of isolated sump.

Cleaning

Cleaning of the CDS systems should be done during dry weather conditions when no flow is entering the system. Cleanout of the CDS with a vacuum truck is generally the most effective and convenient method of excavating pollutants from the system. Simply remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should be pumped out also if pollutant build-up exists in this area.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, an oil or gasoline spill should be cleaned out immediately. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use adsorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash can be netted out if you wish to separate it from the other pollutants. The screen should be power washed to ensure it is free of trash and debris.

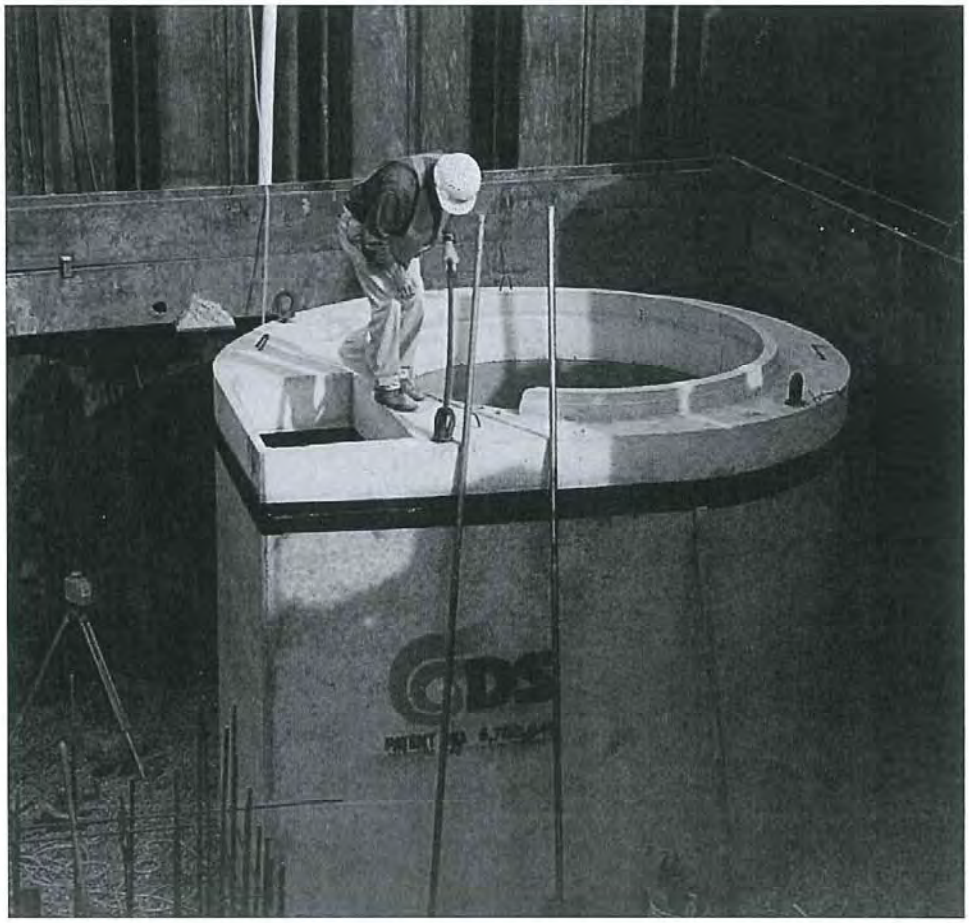
Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and also to ensure proper safety precautions. Confined Space Entry procedures need to be followed. Disposal of all material removed from the CDS system should be done is accordance with local regulations. In many locations, disposal of evacuated sediments may be handled in the same manner as disposal of sediments removed from catch basins or deep sump manholes. Check your local regulations for specific requirements on disposal.



CDS Model	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	yd3	m3
CDS2015-4	4	1.2	3.0	0.9	0.5	0.4
CDS2015	5	1.5	3.0	0.9	1.3	1.0
CDS2020	5	1.5	3.5	1.1	1.3	1.0
CDS2025	5	1.5	4.0	1.2	1.3	1.0
CDS3020	6	1.8	4.0	1.2	2.1	1.6
CDS3030	6	1.8	4.6	1.4	2.1	1.6
CDS3035	6	1.8	5.0	1.5	2.1	1.6
CDS4030	8	2.4	4.6	1.4	5.6	4.3
CDS4040	8	2.4	5.7	1.7	5.6	4.3
CDS4045	8	2.4	6.2	1.9	5.6	4.3

Table 1: CDS Maintenance Indicators and Sediment Storage Capacities

Note: To avoid underestimating the volume of sediment in the chamber, carefully lower the measuring device to the top of the sediment pile. Finer silty particles at the top of the pile may be more difficult to feel with a measuring stick. These finer particles typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile.



CDS Inspection & Maintenance Log

CDS Model: _____ Location: _____

Date	Water depth to sediment[1]	Floatable Layer Thickness[2]	Describe Maintenance Performed	Maintenance Personnel	Comments

1. The water depth to sediment is determined by taking two measurements with a stadia rod: one measurement from the manhole opening to the top of the sediment pile and the other from the manhole opening to the water surface. If the difference between these measurements is less than eighteen inches the system should be cleaned out. **Note: To avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile.**

2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.

7

Support

- Drawings and specifications are available at www.contechstormwater.com.
- Site-specific design support is available from our engineers.

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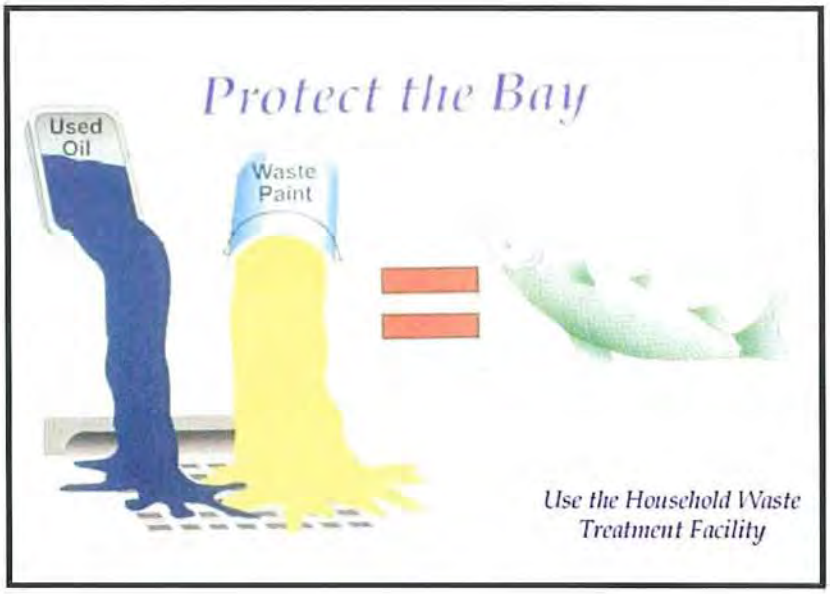
RECYCLED PAPER

Non-Stormwater Discharges SC-10



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Non-stormwater discharges are those flows that do not consist entirely of stormwater. Some non-stormwater discharges do not include pollutants and may be discharged to the storm drain. These include uncontaminated groundwater and natural springs. There are also some non-stormwater discharges that typically do not contain pollutants and may be discharged to the storm drain with conditions. These include car washing, air conditioner condensate, etc. However there are certain non-stormwater discharges that pose environmental concern. These discharges may originate from illegal dumping or from internal floor drains, appliances, industrial processes, sinks, and toilets that are connected to the nearby storm drainage system. These discharges (which may include: process waste waters, cooling waters, wash waters, and sanitary wastewater) can carry substances such as paint, oil, fuel and other automotive fluids, chemicals and other pollutants into storm drains. They can generally be detected through a combination of detection and elimination. The ultimate goal is to effectively eliminate non-stormwater discharges to the stormwater drainage system through implementation of measures to detect, correct, and enforce against illicit connections and illegal discharges of pollutants on streets and into the storm drain system and creeks.

Targeted Constituents

Sediment	
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Approach

Initially the industry must make an assessment of non-stormwater discharges to determine which types must be eliminated or addressed through BMPs. The focus of the following approach is in the elimination of non-stormwater discharges.

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Pollution Prevention

- Ensure that used oil, used antifreeze, and hazardous chemical recycling programs are being implemented. Encourage litter control.

Suggested Protocols

Recommended Complaint Investigation Equipment

- Field Screening Analysis
  - pH paper or meter
  - Commercial stormwater pollutant screening kit that can detect for reactive phosphorus, nitrate nitrogen, ammonium nitrogen, specific conductance, and turbidity
  - Sample jars
  - Sample collection pole
  - A tool to remove access hole covers
- Laboratory Analysis
  - Sample cooler
  - Ice
  - Sample jars and labels
  - Chain of custody forms
- Documentation
  - Camera
  - Notebook
  - Pens
  - Notice of Violation forms
  - Educational materials

General

- Develop clear protocols and lines of communication for effectively prohibiting non-stormwater discharges, especially those that are not classified as hazardous. These are often not responded to as effectively as they need to be.
- Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled or demarcated next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.

- See SC44 Stormwater Drainage System Maintenance for additional information.

Illicit Connections

- Locate discharges from the industrial storm drainage system to the municipal storm drain system through review of "as-built" piping schematics.
- Isolate problem areas and plug illicit discharge points.
- Locate and evaluate all discharges to the industrial storm drain system.

Visual Inspection and Inventory

- Inventory and inspect each discharge point during dry weather.
- Keep in mind that drainage from a storm event can continue for a day or two following the end of a storm and groundwater may infiltrate the underground stormwater collection system. Also, non-stormwater discharges are often intermittent and may require periodic inspections.

Review Infield Piping

- A review of the "as-built" piping schematic is a way to determine if there are any connections to the stormwater collection system.
- Inspect the path of floor drains in older buildings.

Smoke Testing

- Smoke testing of wastewater and stormwater collection systems is used to detect connections between the two systems.
- During dry weather the stormwater collection system is filled with smoke and then traced to sources. The appearance of smoke at the base of a toilet indicates that there may be a connection between the sanitary and the stormwater system.

Dye Testing

- A dye test can be performed by simply releasing a dye into either your sanitary or process wastewater system and examining the discharge points from the stormwater collection system for discoloration.

TV Inspection of Drainage System

- TV Cameras can be employed to visually identify illicit connections to the industrial storm drainage system.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- On paved surfaces, clean up spills with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.

- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.

Once a site has been cleaned:

- Post "No Dumping" signs with a phone number for reporting dumping and disposal.
- Landscaping and beautification efforts of hot spots may also discourage future dumping, as well as provide open space and increase property values.
- Lighting or barriers may also be needed to discourage future dumping.
- See fact sheet SC11 Spill Prevention, Control, and Cleanup.

Inspection

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Conduct field investigations of the industrial storm drain system for potential sources of non-stormwater discharges.
- Pro-actively conduct investigations of high priority areas. Based on historical data, prioritize specific geographic areas and/or incident type for pro-active investigations.

Reporting

- A database is useful for defining and tracking the magnitude and location of the problem.
- Report prohibited non-stormwater discharges observed during the course of normal daily activities so they can be investigated, contained, and cleaned up or eliminated.
- Document that non-stormwater discharges have been eliminated by recording tests performed, methods used, dates of testing, and any on-site drainage points observed.
- Document and report annually the results of the program.
- Maintain documentation of illicit connection and illegal dumping incidents, including significant conditionally exempt discharges that are not properly managed.

Training

- Training of technical staff in identifying and documenting illegal dumping incidents is required.
- Consider posting the quick reference table near storm drains to reinforce training.
- Train employees to identify non-stormwater discharges and report discharges to the appropriate departments.

- Educate employees about spill prevention and cleanup.
- Well-trained employees can reduce human errors that lead to accidental releases or spills. The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur. Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.
- Determine and implement appropriate outreach efforts to reduce non-permissible non-stormwater discharges.
- Conduct spill response drills annually (if no events occurred to evaluate your plan) in cooperation with other industries.
- When a responsible party is identified, educate the party on the impacts of his or her actions.

Spill Response and Prevention

- See SC11 Spill Prevention Control and Cleanup.

Other Considerations

- Many facilities do not have accurate, up-to-date schematic drawings.

Requirements

Costs (including capital and operation & maintenance)

- The primary cost is for staff time and depends on how aggressively a program is implemented.
- Cost for containment and disposal is borne by the discharger.
- Illicit connections can be difficult to locate especially if there is groundwater infiltration.
- Indoor floor drains may require re-plumbing if cross-connections to storm drains are detected.

Maintenance (including administrative and staffing)

- Illegal dumping and illicit connection violations requires technical staff to detect and investigate them.

Supplemental Information

Further Detail of the BMP

Illegal Dumping

- Substances illegally dumped on streets and into the storm drain systems and creeks include paints, used oil and other automotive fluids, construction debris, chemicals, fresh concrete, leaves, grass clippings, and pet wastes. All of these wastes cause stormwater and receiving water quality problems as well as clog the storm drain system itself.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots

- Types and quantities (in some cases) of wastes
- Patterns in time of occurrence (time of day/night, month, or year)
- Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
- Responsible parties

One of the keys to success of reducing or eliminating illegal dumping is increasing the number of people at the facility who are aware of the problem and who have the tools to at least identify the incident, if not correct it. Therefore, train field staff to recognize and report the incidents.

What constitutes a "non-stormwater" discharge?

- Non-stormwater discharges to the stormwater collection system may include any water used directly in the manufacturing process (process wastewater), air conditioning condensate and coolant, non-contact cooling water, cooling equipment condensate, outdoor secondary containment water, vehicle and equipment wash water, sink and drinking fountain wastewater, sanitary wastes, or other wastewaters.

Permit Requirements

- Facilities subject to stormwater permit requirements must include a certification that the stormwater collection system has been tested or evaluated for the presence of non-stormwater discharges. The State's General Industrial Stormwater Permit requires that non-stormwater discharges be eliminated prior to implementation of the facility's SWPPP.

Performance Evaluation

- Review annually internal investigation results; assess whether goals were met and what changes or improvements are necessary.
- Obtain feedback from personnel assigned to respond to, or inspect for, illicit connections and illegal dumping incidents.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Spill Prevention, Control & Cleanup SC-11

Photo Credit: Geoff Brosseau

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	
Nutrients	
Trash	
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Description

Many activities that occur at an industrial or commercial site have the potential to cause accidental or illegal spills. Preparation for accidental or illegal spills, with proper training and reporting systems implemented, can minimize the discharge of pollutants to the environment.

Spills and leaks are one of the largest contributors of stormwater pollutants. Spill prevention and control plans are applicable to any site at which hazardous materials are stored or used. An effective plan should have spill prevention and response procedures that identify potential spill areas, specify material handling procedures, describe spill response procedures, and provide spill clean-up equipment. The plan should take steps to identify and characterize potential spills, eliminate and reduce spill potential, respond to spills when they occur in an effort to prevent pollutants from entering the stormwater drainage system, and train personnel to prevent and control future spills.

Approach

Pollution Prevention

- Develop procedures to prevent/mitigate spills to storm drain systems. Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.

- Develop a Spill Prevention Control and Countermeasure (SPCC) Plan. The plan should include:

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- Description of the facility, owner and address, activities and chemicals present
- Facility map
- Notification and evacuation procedures
- Cleanup instructions
- Identification of responsible departments
- Identify key spill response personnel

- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of process materials that are brought into the facility.

Suggested Protocols (including equipment needs)

Spill Prevention

- Develop procedures to prevent/mitigate spills to storm drain systems. Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.

- If consistent illegal dumping is observed at the facility:
  - Post "No Dumping" signs with a phone number for reporting illegal dumping and disposal. Signs should also indicate fines and penalties applicable for illegal dumping.
  - Landscaping and beautification efforts may also discourage illegal dumping.
  - Bright lighting and/or entrance barriers may also be needed to discourage illegal dumping.

- Store and contain liquid materials in such a manner that if the tank is ruptured, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters, or groundwater.

- If the liquid is oil, gas, or other material that separates from and floats on water, install a spill control device (such as a tee section) in the catch basins that collects runoff from the storage tank area.

- Routine maintenance:
  - Place drip pans or absorbent materials beneath all mounted taps, and at all potential drip and spill locations during filling and unloading of tanks. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.
  - Store and maintain appropriate spill cleanup materials in a location known to all near the tank storage area; and ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.
  - Sweep and clean the storage area monthly if it is paved, *do not hose down the area to a storm drain.*

- Check tanks (and any containment sumps) daily for leaks and spills. Replace tanks that are leaking, corroded, or otherwise deteriorating with tanks in good condition. Collect all spilled liquids and properly dispose of them.

- Label all containers according to their contents (e.g., solvent, gasoline).
- Label hazardous substances regarding the potential hazard (corrosive, radioactive, flammable, explosive, poisonous).
- Prominently display required labels on transported hazardous and toxic materials (per US DOT regulations).
- Identify key spill response personnel.

Spill Control and Cleanup Activities

- Follow the Spill Prevention Control and Countermeasure Plan.
- Clean up leaks and spills immediately.
- Place a stockpile of spill cleanup materials where it will be readily accessible (e.g., near storage and maintenance areas).
- On paved surfaces, clean up spills with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste. Physical methods for the cleanup of dry chemicals include the use of brooms, shovels, sweepers, or plows.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Chemical cleanups of material can be achieved with the use of adsorbents, gels, and foams. Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.

Reporting

- Report spills that pose an immediate threat to human health or the environment to the Regional Water Quality Control Board.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour).
- Report spills to local agencies, such as the fire department; they can assist in cleanup.
- Establish a system for tracking incidents. The system should be designed to identify the following:

  - Types and quantities (in some cases) of wastes

  - Patterns in time of occurrence (time of day/night, month, or year)

- Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
- Responsible parties

Training

- Educate employees about spill prevention and cleanup.
- Well-trained employees can reduce human errors that lead to accidental releases or spills:
  - The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur.
  - Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.
- Employees should be educated about aboveground storage tank requirements. Employees responsible for aboveground storage tanks and liquid transfers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.
- Train employees to recognize and report illegal dumping incidents.

Other Considerations (Limitations and Regulations)

- A Spill Prevention Control and Countermeasure Plan (SPCC) is required for facilities that are subject to the oil pollution regulations specified in Part 112 of Title 40 of the Code of Federal Regulations or if they have a storage capacity of 10,000 gallons or more of petroleum. (Health and Safety Code 6.67)
- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.
- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, prohibiting any hard connections to the storm drain.

Requirements

Costs (including capital and operation & maintenance)

- Will vary depending on the size of the facility and the necessary controls.
- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of contaminated soil or water can be quite expensive.

Maintenance (including administrative and staffing)

- This BMP has no major administrative or staffing requirements. However, extra time is needed to properly handle and dispose of spills, which results in increased labor costs.

Supplemental Information

Further Detail of the BMP

Reporting

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the facility and the effectiveness of BMPs. A good record keeping system helps the facility minimize incident recurrence, correctly respond with appropriate cleanup activities, and comply with legal requirements. A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm sewer. These records should contain the following information:

- Date and time of the incident
- Weather conditions
- Duration of the spill/leak/discharge
- Cause of the spill/leak/discharge
- Response procedures implemented
- Persons notified
- Environmental problems associated with the spill/leak/discharge

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- The date and time the inspection was performed
- Name of the inspector
- Items inspected
- Problems noted
- Corrective action required
- Date corrective action was taken

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

Aboveground Tank Leak and Spill Control

Accidental releases of materials from aboveground liquid storage tanks present the potential for contaminating stormwater with many different pollutants. Materials spilled, leaked, or lost from

tanks may accumulate in soils or on impervious surfaces and be carried away by stormwater runoff.

The most common causes of unintentional releases are:

- Installation problems
- Failure of piping systems (pipes, pumps, flanges, couplings, hoses, and valves)
- External corrosion and structural failure
- Spills and overfills due to operator error
- Leaks during pumping of liquids or gases from truck or rail car to a storage tank or vice versa

Storage of reactive, ignitable, or flammable liquids should comply with the Uniform Fire Code and the National Electric Code. Practices listed below should be employed to enhance the code requirements:

- Tanks should be placed in a designated area.
- Tanks located in areas where firearms are discharged should be encapsulated in concrete or the equivalent.
- Designated areas should be impervious and paved with Portland cement concrete, free of cracks and gaps, in order to contain leaks and spills.
- Liquid materials should be stored in UL approved double walled tanks or surrounded by a curb or dike to provide the volume to contain 10 percent of the volume of all of the containers or 110 percent of the volume of the largest container, whichever is greater. The area inside the curb should slope to a drain.
- For used oil or dangerous waste, a dead-end sump should be installed in the drain.
- All other liquids should be drained to the sanitary sewer if available. The drain must have a positive control such as a lock, valve, or plug to prevent release of contaminated liquids.
- Accumulated stormwater in petroleum storage areas should be passed through an oil/water separator.

Maintenance is critical to preventing leaks and spills. Conduct routine inspections and:

- Check for external corrosion and structural failure.
- Check for spills and overfills due to operator error.
- Check for failure of piping system (pipes, pumps, flanger, coupling, hoses, and valves).
- Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.

- Visually inspect new tank or container installation for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Frequently relocate accumulated stormwater during the wet season.
- Periodically conduct integrity testing by a qualified professional.

Vehicle Leak and Spill Control

Major spills on roadways and other public areas are generally handled by highly trained Hazmat teams from local fire departments or environmental health departments. The measures listed below pertain to leaks and smaller spills at vehicle maintenance shops.

In addition to implementing the spill prevention, control, and clean up practices above, use the following measures related to specific activities:

Vehicle and Equipment Maintenance

- Perform all vehicle fluid removal or changing inside or under cover to prevent the run-on of stormwater and the runoff of spills.
- Regularly inspect vehicles and equipment for leaks, and repair immediately.
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Immediately drain all fluids from wrecked vehicles.
- Store wrecked vehicles or damaged equipment under cover.
- Place drip pans or absorbent materials under heavy equipment when not in use.
- Use adsorbent materials on small spills rather than hosing down the spill.
- Remove the adsorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- Oil filters disposed of in trashcans or dumpsters can leak oil and contaminate stormwater. Place the oil filter in a funnel over a waste oil recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask your oil supplier or recycler about recycling oil filters.

- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries, even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- Design the fueling area to prevent the run-on of stormwater and the runoff of spills:
  - Cover fueling area if possible.
  - Use a perimeter drain or slope pavement inward with drainage to a sump.
  - Pave fueling area with concrete rather than asphalt.
- If dead-end sump is not used to collect spills, install an oil/water separator.
- Install vapor recovery nozzles to help control drips as well as air pollution.
- Discourage "topping-off" of fuel tanks.
- Use secondary containment when transferring fuel from the tank truck to the fuel tank.
- Use adsorbent materials on small spills and general cleaning rather than hosing down the area. Remove the adsorbent materials promptly.
- Carry out all Federal and State requirements regarding underground storage tanks, or install above ground tanks.
- Do not use mobile fueling of mobile industrial equipment around the facility; rather, transport the equipment to designated fueling areas.
- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Train employees in proper fueling and cleanup procedures.

Industrial Spill Prevention Response

For the purposes of developing a spill prevention and response program to meet the stormwater regulations, facility managers should use information provided in this fact sheet and the spill prevention/response portions of the fact sheets in this handbook, for specific activities. The program should:

- Integrate with existing emergency response/hazardous materials programs (e.g., Fire Department)
- Develop procedures to prevent/mitigate spills to storm drain systems
- Identify responsible departments
- Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures
- Address spills at municipal facilities, as well as public areas

- Provide training concerning spill prevention, response and cleanup to all appropriate personnel

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Stormwater Managers Resource Center http://www.stormwatercenter.net/

Contaminated or Erodible Areas SC-40

Description

Areas within an industrial site that are bare of vegetation or are subject to activities that promote the suppression of vegetation are often subject to erosion. In addition, they may or may not be contaminated from past or current activities. If the area is temporarily bare because of construction, see SC-42, Building Repair, Remodeling, and Construction. Sites with excessive erosion or the potential for excessive erosion should consider employing the soil erosion BMPs identified in the Construction BMP Handbook. Note that this fact sheet addresses soils that are not so contaminated as to exceed hazardous waste criteria (see Title 22 California Code of Regulations for Hazardous Waste Criteria).

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Pollution Prevention

Preserve natural vegetation whenever possible. See also EC-2, Preservation of Existing Vegetation, in the Construction BMP Handbook.

Suggested Protocols

- Preserve natural vegetation.
- Analyze soil conditions.
- Re-vegetate when necessary.
- Remove contaminated soil.
- Utilize chemical stabilization when needed. See also EC-5, Soil Binders, and EC-13, Polyacrylamide, in the Construction BMP Handbook.
- Use geosynthetic membranes to control erosion if feasible. See also EC-7, Geotextiles and Mats, in the Construction BMP Handbook.

Training

Training is not a significant element of this best management practice.

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Other Considerations

- Disadvantages of preserving natural vegetation or revegetation include:
  - Requires substantial planning to preserve and maintain the existing vegetation
  - May not be cost-effective with high land costs
  - Lack of rainfall, inadequate irrigation and/or poor soils may limit the success of re-vegetated areas
- Disadvantages of chemical stabilization include:
  - Creation of impervious surfaces
  - May cause harmful effects on water quality
  - Is usually more expensive than vegetative cover

Requirements

Costs

Except for preservation of natural vegetation, each of the above solutions can be quite expensive depending upon the size of the area.

Maintenance

Maintenance should be minimal, except possibly if irrigation of vegetation is necessary.

Supplemental Information

Preserving Vegetation to Minimize Erosion

Preserving stabilized areas minimizes erosion potential, protects water quality, and provides aesthetic benefits. The most effective way to control erosion is to preserve existing vegetation. Preservation of natural vegetation provides a natural buffer zone and an opportunity for infiltration of stormwater and capture of pollutants in the soil matrix. This practice can be used as a permanent source control measure.

Vegetation preservation should be incorporated into the site. Preservation requires good site management to minimize the impact of construction when construction is underway and exposure of soils after construction. Proper maintenance is important to ensure healthy vegetation that can control erosion. Different species, soil types, and climatic conditions will require different maintenance activities such as mulching, fertilizing, liming, irrigation, pruning and weed and pest control. Maintenance should be performed regularly especially during construction phases.

The preferred approach is to leave as much native vegetation on-site as possible, thereby reducing or eliminating any erosion problem. However, assuming the site already has contaminated or erodible surface areas, there are four possible courses of action which can be taken:

- The area can be revegetated if it is not in use and therefore not subject to damage from site activities. In as much as the area is already devoid of vegetation, special measures are likely

necessary. Lack of vegetation may be due to the lack of water and/or poor soils. The latter can perhaps be solved with fertilization, or the ground may simply be too compacted from prior use. Improving soil conditions may be sufficient to support the recovery of vegetation. Use process wastewater for irrigation if possible. Finally, see the Construction BMP Handbook for further procedures on establishing vegetation.

- Chemical stabilization can be used as an alternate method in areas where temporary seeding practices cannot be used because of season or climate. It can provide immediate, effective, and inexpensive erosion control. Application rates and procedures recommended by the manufacturer should be followed as closely as possible to prevent the products from forming ponds and creating large areas where moisture cannot penetrate the soil. See also EC-5, Soil Binders, and EC-13, Polyacrylamide, in the Construction BMP Handbook for more information. Advantages of chemical stabilization include:
  - Applied easily to the surface
  - Stabilizes areas effectively
  - Provides immediate protection to soils that are in danger of erosion
- Contaminated soils can be removed, however this is a last resort and quite expensive. The level and extent of the contamination must be determined. This determination and removal must comply with State and Federal regulations, permits must be acquired and fees paid.
- Geosynthetics may be used. Geosynthetics include those materials that are designed as an impermeable barrier to contain or control large amounts of liquid or solid matter. Geosynthetics have been developed primarily for use in landfills and surface impoundments, and the technology is well established. There are two general types of geosynthetics: geomembranes (impermeable) and geotextiles (permeable). Geomembranes are composed of one of three types of impermeable materials: elastomers (rubbers), thermoplasics (plastics), or a combination of these two types of materials. See also EC-7, Geotextiles and Mats, in the Construction BMP Handbook for more information. The advantages of these materials include:
  - A variety of compounds are available
  - Sheeting is produced in a factory environment
  - Polymeric membranes are flexible
  - Installation is simple

  Disadvantages include:
  - Chemical resistance must be determined for each application
  - Seaming systems may be a weak link in the system
  - Many materials are subject to attack from biotic, mechanical, or environmental sources

Geotextiles are uncoated synthetic textile products that are not watertight. They are composed of a variety of materials, most commonly polypropylene and polyester. Geotextiles serve five basic functions:

- Filtration
- Drainage
- Separation
- Reinforcement
- Armoring

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Building & Grounds Maintenance SC-41

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	
Organics	

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, abnormal pH, and oils and greases. Utilizing the protocols in this fact sheet will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.

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- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

Suggested Protocols

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.
- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement.

Landscaping Activities

- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.

Building Repair, Remodeling, and Construction

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.
- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. This is particularly necessary on rainy days. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.

- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. If directed off-site, you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water: do not put it in the storm drain; pour over landscaped areas.
- Use hand weeding where practical.

Fertilizer and Pesticide Management

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Use less toxic pesticides that will do the job when applicable. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g., spray drift) of pesticides, including consideration of alternative application techniques.
- Apply pesticides only when wind speeds are low.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Dispose of empty pesticide containers according to the instructions on the container label.

- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.

Training

- Educate and train employees on pesticide use and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the nature of the staff.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials, such as brooms, dustpans, and vacuum sweepers (if desired) near the storage area where it will be readily accessible.
- Have employees trained in spill containment and cleanup present during the loading/unloading of dangerous wastes, liquid chemicals, or other materials.
- Familiarize employees with the Spill Prevention Control and Countermeasure Plan.
- Clean up spills immediately.

Other Considerations

Alternative pest/weed controls may not be available, suitable, or effective in many cases.

Requirements

Costs

- Cost will vary depending on the type and size of facility.
- Overall costs should be low in comparison to other BMPs.

Maintenance

Sweep paved areas regularly to collect loose particles. Wipe up spills with rags and other absorbent material immediately, do not hose down the area to a storm drain.

Supplemental Information

Further Detail of the BMP

Fire Sprinkler Line Flushing

Building fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water, though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping, but it is subject to rusting and results in lower quality water. Initially, the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time (typically a year) and between flushes may accumulate iron, manganese, lead, copper, nickel, and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Mobile Cleaners Pilot Program: Final Report. 1997. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Building Repair and Construction SC-42

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Recycle

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Description

Modifications are common particularly at large industrial sites. The activity may vary from minor and normal building repair to major remodeling, or the construction of new facilities. These activities can generate pollutants including solvents, paints, paint and varnish removers, finishing residues, spent thinners, soap cleaners, kerosene, asphalt and concrete materials, adhesive residues, and old asbestos installation. Protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants to stormwater from building repair, remodeling, and construction by using soil erosion controls, enclosing or covering building material storage areas, using good housekeeping practices, using safer alternative products, and training employees.

Approach

Pollution Prevention

- Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical.
- Buy recycled products to the maximum extent practical.
- Inform on-site contractors of company policy on these matters and include appropriate provisions in their contract to ensure certain proper housekeeping and disposal practices are implemented.

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- Make sure that nearby storm drains are well marked to minimize the chance of inadvertent disposal of residual paints and other liquids.

Suggested Protocols

Repair & Remodeling

- Follow BMPs identified in Construction BMP Handbook.
- Maintain good housekeeping practices while work is underway.
- Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Cover materials of particular concern that must be left outside, particularly during the rainy season.
- Do not dump waste liquids down the storm drain.
- Dispose of wash water, sweepings, and sediments properly.
- Store materials properly that are normally used in repair and remodeling such as paints and solvents.
- Sweep out the gutter or wash the gutter and trap the particles at the outlet of the downspout if when repairing roofs, small particles have accumulated in the gutter. A sock or geofabric placed over the outlet may effectively trap the materials. If the downspout is tight lined, place a temporary plug at the first convenient point in the storm drain and pump out the water with a vactor truck, and clean the catch basin sump where you placed the plug.
- Properly store and dispose waste materials generated from construction activities. See Construction BMP Handbook.
- Clean the storm drain system in the immediate vicinity of the construction activity after it is completed.

Painting

- Enclose painting operations consistent with local air quality regulations and OSHA.
- Local air pollution regulations may, in many areas of the state, specify painting procedures which if properly carried out are usually sufficient to protect water quality.
- Develop paint handling procedures for proper use, storage, and disposal of paints.
- Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle.
- Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint containers.
- Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective.
- Transfer and load paint and hot thermoplastic away from storm drain inlets.

- Do not transfer or load paint near storm drain inlets.
- Plug nearby storm drain inlets prior to starting painting and remove plugs when job is complete when there is significant risk of a spill reaching storm drains.
- Cover nearby storm drain inlets prior to starting work if sand blasting is used to remove paint.
- Use a ground cloth to collect the chips if painting requires scraping or sand blasting of the existing surface. Dispose the residue properly.
- Cover or enclose painting operations properly to avoid drift.
- Clean the application equipment in a sink that is connected to the sanitary sewer if using water based paints.
- Capture all cleanup-water and dispose of properly.
- Dispose of paints containing lead or tributyl tin and considered a hazardous waste properly.
- Store leftover paints if they are to be kept for the next job properly, or dispose properly.
- Recycle paint when possible. Dispose of paint at an appropriate household hazardous waste facility.

Training

Proper education of off-site contractors is often overlooked. The conscientious efforts of well trained employees can be lost by unknowing off-site contractors, so make sure they are well informed about what they are expected to do.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Clean up spills immediately.
- Excavate and remove the contaminated (stained) soil if a spill occurs on dirt.

Limitations

- This BMP is for minor construction only. The State's General Construction Activity Stormwater Permit has more requirements for larger projects. The companion "Construction Best Management Practice Handbook" contains specific guidance and best management practices for larger-scale projects.
- Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.
- Be certain that actions to help stormwater quality are consistent with Cal- and Fed-OSHA and air quality regulations.

SC-42 Building Repair and Construction

Requirements

Costs

These BMPs are generally low to modest in cost.

Maintenance

N/A

Supplemental Information

Further Detail of the BMP

Soil/Erosion Control

If the work involves exposing large areas of soil, employ the appropriate soil erosion and control techniques. See the Construction Best Management Practice Handbook. If old buildings are being torn down and not replaced in the near future, stabilize the site using measures described in SC-40 Contaminated or Erodible Areas.

If a building is to be placed over an open area with a storm drainage system, make sure the storm inlets within the building are covered or removed, or the storm line is connected to the sanitary sewer. If because of the remodeling a new drainage system is to be installed or the existing system is to be modified, consider installing catch basins as they serve as effective "in-line" treatment devices. See Treatment Control Fact Sheet TC-20 Wet Pond/Basin in Section 5 of the New Development and Redevelopment Handbook regarding design criteria. Include in the catch basin a "turn-down" elbow or similar device to trap floatables.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Parking/Storage Area Maintenance SC-43

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Description

Parking lots and storage areas can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants from parking/storage areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

Approach

The goal of this program is to ensure stormwater pollution prevention practices are considered when conducting activities on or around parking areas and storage areas to reduce potential for pollutant discharge to receiving waters. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Encourage alternative designs and maintenance strategies for impervious parking lots. (See New Development and Redevelopment BMP Handbook)
- Keep accurate maintenance logs to evaluate BMP implementation.

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SC-43 Parking/Storage Area Maintenance

Suggested Protocols

General

- Keep the parking and storage areas clean and orderly. Remove debris in a timely fashion.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices.
- Utilize sand filters or oleophilic collectors for oily waste in low quantities.
- Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- Design lot to include semi-permeable hardscape.
- Discharge soapy water remaining in mop or wash buckets to the sanitary sewer through a sink, toilet, clean-out, or wash area with drain.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide an adequate number of litter receptacles.
- Clean out and cover litter receptacles frequently to prevent spillage.
- Provide trash receptacles in parking lots to discourage litter.
- Routinely sweep, shovel, and dispose of litter in the trash.

Surface Cleaning

- Use dry cleaning methods (e.g., sweeping, vacuuming) to prevent the discharge of pollutants into the stormwater conveyance system if possible.
- Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- Sweep all parking lots at least once before the onset of the wet season.
- Follow the procedures below if water is used to clean surfaces:
  - Block the storm drain or contain runoff.
  - Collect and pump wash water to the sanitary sewer or discharge to a pervious surface. Do not allow wash water to enter storm drains.
  - Dispose of parking lot sweeping debris and dirt at a landfill.
- Follow the procedures below when cleaning heavy oily deposits:
  - Clean oily spots with absorbent materials.
  - Use a screen or filter fabric over inlet, then wash surfaces.

- Do not allow discharges to the storm drain.
- Vacuum/pump discharges to a tank or discharge to sanitary sewer.
- Appropriately dispose of spilled materials and absorbents.

Surface Repair

- Preheat, transfer or load hot bituminous material away from storm drain inlets.
- Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff.
- Cover and seal nearby storm drain inlets where applicable (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.
- Use only as much water as necessary for dust control, to avoid runoff.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

Inspection

- Have designated personnel conduct inspections of parking facilities and stormwater conveyance systems associated with parking facilities on a regular basis.
- Inspect cleaning equipment/sweepers for leaks on a regular basis.

Training

- Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.
- Train employees and contractors in proper techniques for spill containment and cleanup.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials where it will be readily accessible or at a central location.
- Clean up fluid spills immediately with absorbent rags or material.
- Dispose of spilled material and absorbents properly.

Other Considerations

Limitations related to sweeping activities at large parking facilities may include high equipment costs, the need for sweeper operator training, and the inability of current sweeper technology to remove oil and grease.

SC-43 Parking/Storage Area Maintenance

Requirements

Costs

Cleaning/sweeping costs can be quite large. Construction and maintenance of stormwater structural controls can be quite expensive as well.

Maintenance

- Sweep parking lot regularly to minimize cleaning with water.
- Clean out oil/water/sand separators regularly, especially after heavy storms.
- Clean parking facilities regularly to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions.

Supplemental Information

Further Detail of the BMP

Surface Repair

Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff. Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal. Only use only as much water as is necessary for dust control to avoid runoff.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Drainage System Maintenance SC-44

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff and stormwater that may contain certain pollutants. The protocols in this fact sheet are intended to reduce pollutants reaching receiving waters through proper conveyance system operation and maintenance.

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	
Bacteria	✓
Oil and Grease	
Organics	

Approach

Pollution Prevention

Maintain catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Suggested Protocols

Catch Basins/Inlet Structures

- Staff should regularly inspect facilities to ensure compliance with the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC34 Waste Handling and Disposal).

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- Clean catch basins, storm drain inlets, and other conveyance structures before the wet season to remove sediments and debris accumulated during the summer.
- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes if necessary with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed. Do not dewater near a storm drain or stream.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect and pump flushed effluent to the sanitary sewer for treatment whenever possible.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge to reach the storm drain system when cleaning a storm drain pump station or other facility.
- Conduct routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.

Open Channel

- Modify storm channel characteristics to improve channel hydraulics, increase pollutant removals, and enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a Steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies (SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS.

Illicit Connections and Discharges

- Look for evidence of illegal discharges or illicit connections during routine maintenance of conveyance system and drainage structures:
  - Is there evidence of spills such as paints, discoloring, etc?

- Are there any odors associated with the drainage system?
- Record locations of apparent illegal discharges/illicit connections?
- Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of upgradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
- Eliminate the discharge once the origin of flow is established.

- Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Inspect and clean up hot spots and other storm drainage areas regularly where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Allow only properly trained individuals to handle hazardous materials/wastes.
- Have staff involved in detection and removal of illicit connections trained in the following:
  - OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).

- OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and Federal OSHA 29 CFR 1910.146).
- Procedural training (field screening, sampling, smoke/dye testing, TV inspection).

Spill Response and Prevention

- Investigate all reports of spills, leaks, and/or illegal dumping promptly.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags) or dig up, remove, and properly dispose of contaminated soil.
- Refer to fact sheet SC-11 Spill Prevention, Control, and Cleanup.

Other Considerations (Limitations and Regulations)

- Clean-up activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and prohibition against disposal of flushed effluent to sanitary sewer in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Local municipal codes may include sections prohibiting discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget.
- The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal. The primary cost is for staff time. Cost depends on how aggressively a program is implemented. Other cost considerations for an illegal dumping program include:
  - Purchase and installation of signs.
  - Rental of vehicle(s) to haul illegally-disposed items and material to landfills.
  - Rental of heavy equipment to remove larger items (e.g., car bodies) from channels.
  - Purchase of landfill space to dispose of illegally-dumped items and material.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.
- Teams of at least two people plus administrative personnel are required to identify illicit discharges, depending on the complexity of the storm sewer system.
- Arrangements must be made for proper disposal of collected wastes.
- Technical staff are required to detect and investigate illegal dumping violations.

Supplemental Information

Further Detail of the BMP

Storm Drain Flushing

Flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in storm drainage systems. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as an open channel, another point where flushing will be initiated, or the sanitary sewer and the treatment facilities, thus preventing resuspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. Deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, thereby releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce impacts of stormwater pollution, a second inflatable device placed well downstream may be used to recollect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to recollect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75% for organics and 55-65% for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm sewer flushing.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

Ferguson, B.K. 1991. Urban Stream Reclamation, p. 324-322, Journal of Soil and Water Conservation.

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line:
http://www.epa.gov/npdes/menuofbmps/poll_16.htm

Storm Drain Signage SD-13

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include "NO DUMPING

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– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Trash Storage Areas SD-32

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

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- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Infiltration Trench TC-10

Design Considerations

- Accumulation of Metals
- Clogged Soil Outlet Structures
- Vegetation/Landscape Maintenance

Description

An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Pretreatment using buffer strips, swales, or detention basins is important for limiting amounts of coarse sediment entering the trench which can clog and render the trench ineffective.

California Experience

Caltrans constructed two infiltration trenches at highway maintenance stations in Southern California. Of these, one failed to operate to the design standard because of average soil infiltration rates lower than that measured in the single infiltration test. This highlights the critical need for appropriate evaluation of the site. Once in operation, little maintenance was required at either site.

Advantages

- Provides 100% reduction in the load discharged to surface waters.
- An important benefit of infiltration trenches is the approximation of pre-development hydrology during which a significant portion of the average annual rainfall runoff is infiltrated rather than flushed directly to creeks.
- If the water quality volume is adequately sized, infiltration trenches can be useful for providing control of channel forming (erosion) and high frequency (generally less than the 2-year) flood events.

Targeted Constituents

☑	Sediment	■
☑	Nutrients	■
☑	Trash	■
☑	Metals	■
☑	Bacteria	■
☑	Oil and Grease	■
☑	Organics	■

Legend ***(Removal Effectiveness)***

● Low ■ High

▲ Medium

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- As an underground BMP, trenches are unobtrusive and have little impact of site aesthetics.

Limitations

- Have a high failure rate if soil and subsurface conditions are not suitable.
- May not be appropriate for industrial sites or locations where spills may occur.
- The maximum contributing area to an individual infiltration practice should generally be less than 5 acres.
- Infiltration basins require a minimum soil infiltration rate of 0.5 inches/hour, not appropriate at sites with Hydrologic Soil Types C and D.
- If infiltration rates exceed 2.4 inches/hour, then the runoff should be fully treated prior to infiltration to protect groundwater quality.
- Not suitable on fill sites or steep slopes.
- Risk of groundwater contamination in very coarse soils.
- Upstream drainage area must be completely stabilized before construction.
- Difficult to restore functioning of infiltration trenches once clogged.

Design and Sizing Guidelines

- Provide pretreatment for infiltration trenches in order to reduce the sediment load. Pretreatment refers to design features that provide settling of large particles before runoff reaches a management practice, easing the long-term maintenance burden. Pretreatment is important for all structural stormwater management practices, but it is particularly important for infiltration practices. To ensure that pretreatment mechanisms are effective, designers should incorporate practices such as grassed swales, vegetated filter strips, detention, or a plunge pool in series.
- Specify locally available trench rock that is 1.5 to 2.5 inches in diameter.
- Determine the trench volume by assuming the WQV will fill the void space based on the computed porosity of the rock matrix (normally about 35%).
- Determine the bottom surface area needed to drain the trench within 72 hr by dividing the WQV by the infiltration rate.

$$d = \frac{WQV + RFV}{SA}$$

- Calculate trench depth using the following equation:

where:

D = Trench depth

WQV	=	Water quality volume
RFV	=	Rock fill volume
SA	=	Surface area of the trench bottom

- The use of vertical piping, either for distribution or infiltration enhancement shall not be allowed to avoid device classification as a Class V injection well per 40 CFR146.5(e)(4).
- Provide observation well to allow observation of drain time.
- May include a horizontal layer of filter fabric just below the surface of the trench to retain sediment and reduce the potential for clogging.

Construction/Inspection Considerations

Stabilize the entire area draining to the facility before construction begins. If impossible, place a diversion berm around the perimeter of the infiltration site to prevent sediment entrance during construction. Stabilize the entire contributing drainage area before allowing any runoff to enter once construction is complete.

Performance

Infiltration trenches eliminate the discharge of the water quality volume to surface receiving waters and consequently can be considered to have 100% removal of all pollutants within this volume. Transport of some of these constituents to groundwater is likely, although the attenuation in the soil and subsurface layers will be substantial for many constituents.

Infiltration trenches can be expected to remove up to 90 percent of sediments, metals, coliform bacteria and organic matter, and up to 60 percent of phosphorus and nitrogen in the infiltrated runoff (Schueler, 1992). Biochemical oxygen demand (BOD) removal is estimated to be between 70 to 80 percent. Lower removal rates for nitrate, chlorides and soluble metals should be expected, especially in sandy soils (Schueler, 1992). Pollutant removal efficiencies may be improved by using washed aggregate and adding organic matter and loam to the subsoil. The stone aggregate should be washed to remove dirt and fines before placement in the trench. The addition of organic material and loam to the trench subsoil may enhance metals removal through adsorption.

Siting Criteria

The use of infiltration trenches may be limited by a number of factors, including type of native soils, climate, and location of groundwater table. Site characteristics, such as excessive slope of the drainage area, fine-grained soil types, and proximate location of the water table and bedrock, may preclude the use of infiltration trenches. Generally, infiltration trenches are not suitable for areas with relatively impermeable soils containing clay and silt or in areas with fill.

As with any infiltration BMP, the potential for groundwater contamination must be carefully considered, especially if the groundwater is used for human consumption or agricultural purposes. The infiltration trench is not suitable for sites that use or store chemicals or hazardous materials unless hazardous and toxic materials are prevented from entering the trench. In these areas, other BMPs that do not allow interaction with the groundwater should be considered.

The potential for spills can be minimized by aggressive pollution prevention measures. Many municipalities and industries have developed comprehensive spill prevention control and countermeasure (SPCC) plans. These plans should be modified to include the infiltration trench and the contributing drainage area. For example, diversion structures can be used to prevent spills from entering the infiltration trench. Because of the potential to contaminate groundwater, extensive site investigation must be undertaken early in the site planning process to establish site suitability for the installation of an infiltration trench.

Longevity can be increased by careful geotechnical evaluation prior to construction and by designing and implementing an inspection and maintenance plan. Soil infiltration rates and the water table depth should be evaluated to ensure that conditions are satisfactory for proper operation of an infiltration trench. Pretreatment structures, such as a vegetated buffer strip or water quality inlet, can increase longevity by removing sediments, hydrocarbons, and other materials that may clog the trench. Regular maintenance, including the replacement of clogged aggregate, will also increase the effectiveness and life of the trench.

Evaluation of the viability of a particular site is the same as for infiltration basins and includes:

- Determine soil type (consider RCS soil type 'A, B or C' only) from mapping and consult USDA soil survey tables to review other parameters such as the amount of silt and clay, presence of a restrictive layer or seasonal high water table, and estimated permeability. The soil should not have more than 30 percent clay or more than 40 percent of clay and silt combined. Eliminate sites that are clearly unsuitable for infiltration.

- Groundwater separation should be at least 3 m from the basin invert to the measured ground water elevation. There is concern at the state and regional levels of the impact on groundwater quality from infiltrated runoff, especially when the separation between groundwater and the surface is small.

- Location away from buildings, slopes and highway pavement (greater than 6 m) and wells and bridge structures (greater than 30 m). Sites constructed of fill, having a base flow or with a slope greater than 15 percent should not be considered.

- Ensure that adequate head is available to operate flow splitter structures (to allow the basin to be offline) without ponding in the splitter structure or creating backwater upstream of the splitter.

- Base flow should not be present in the tributary watershed.

Secondary Screening Based on Site Geotechnical Investigation

- At least three in-hole conductivity tests shall be performed using USBR 7300-89 or Bouwer-Rice procedures (the latter if groundwater is encountered within the boring), two tests at different locations within the proposed basin and the third down gradient by no more than approximately 10 m. The tests shall measure permeability in the side slopes and the bed within a depth of 3 m of the invert.

- The minimum acceptable hydraulic conductivity as measured in any of the three required test holes is 13 mm/hr. If any test hole shows less than the minimum value, the site should be disqualified from further consideration.

- Exclude from consideration sites constructed in fill or partially in fill unless no silts or clays are present in the soil boring. Fill tends to be compacted, with clays in a dispersed rather than flocculated state, greatly reducing permeability.
- The geotechnical investigation should be such that a good understanding is gained as to how the stormwater runoff will move in the soil (horizontally or vertically) and if there are any geological conditions that could inhibit the movement of water.

Maintenance

Infiltration trenches required the least maintenance of any of the BMPs evaluated in the Caltrans study, with approximately 17 field hours spent on the operation and maintenance of each site. Inspection of the infiltration trench was the largest field activity, requiring approximately 8 hr/yr.

In addition to reduced water quality performance, clogged infiltration trenches with surface standing water can become a nuisance due to mosquito breeding. If the trench takes more than 72 hours to drain, then the rock fill should be removed and all dimensions of the trench should be increased by 2 inches to provide a fresh surface for infiltration.

Cost

Construction Cost

Infiltration trenches are somewhat expensive, when compared to other stormwater practices, in terms of cost per area treated. Typical construction costs, including contingency and design costs, are about \$5 per ft^3 of stormwater treated (SWRPC, 1991; Brown and Schueler, 1997). Actual construction costs may be much higher. The average construction cost of two infiltration trenches installed by Caltrans in southern California was about \$50/ft^3; however, these were constructed as retrofit installations.

Infiltration trenches typically consume about 2 to 3 percent of the site draining to them, which is relatively small. In addition, infiltration trenches can fit into thin, linear areas. Thus, they can generally fit into relatively unusable portions of a site.

Maintenance Cost

One cost concern associated with infiltration practices is the maintenance burden and longevity. If improperly sited or maintained, infiltration trenches have a high failure rate. In general, maintenance costs for infiltration trenches are estimated at between 5 percent and 20 percent of the construction cost. More realistic values are probably closer to the 20-percent range, to ensure long-term functionality of the practice.

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Information Resources

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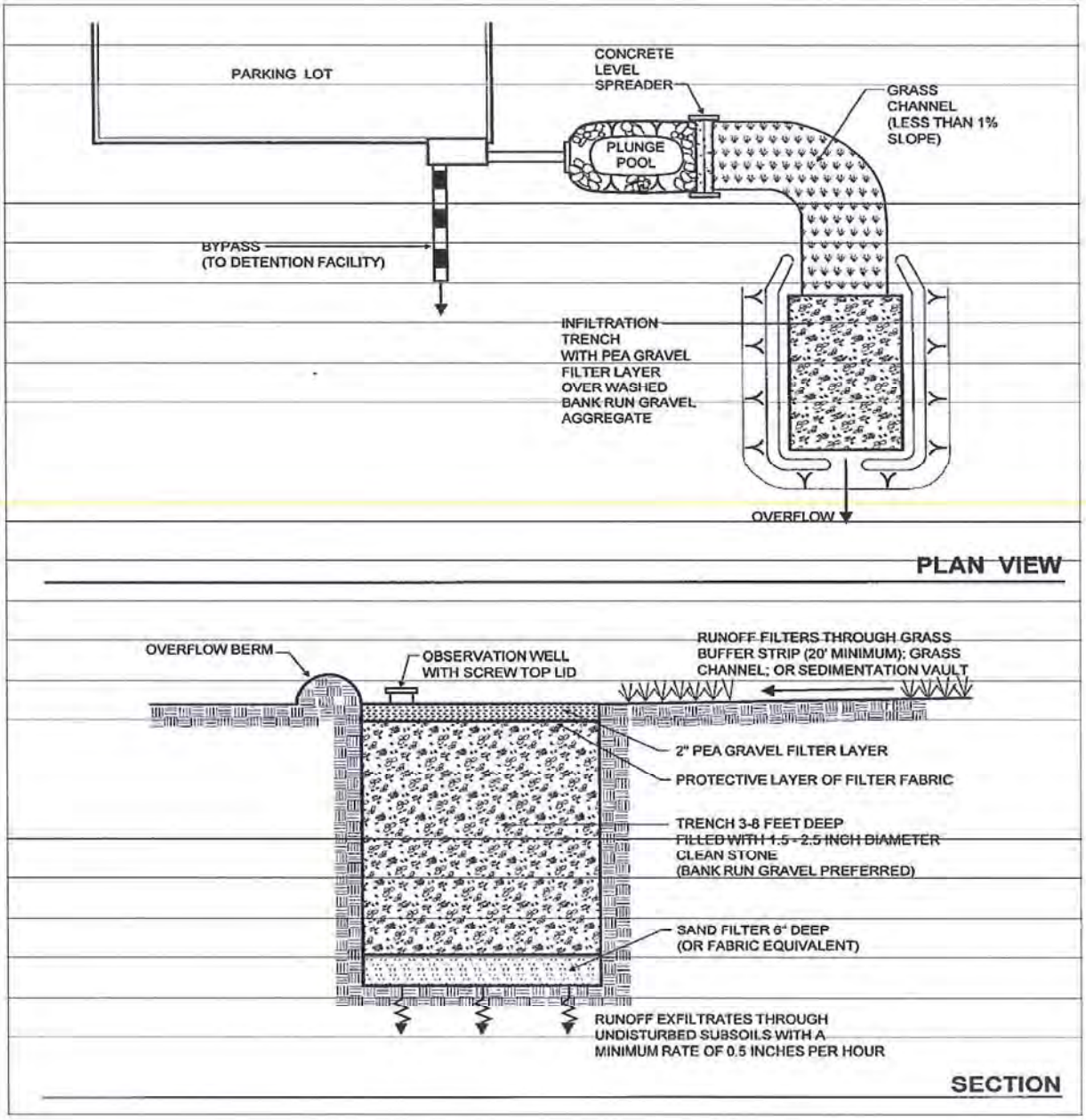
PARKING LOT
CONCRETE LEVEL SPREADER
GRASS CHANNEL (LESS THAN 1% SLOPE)
PLUNGE POOL
BYPASS (TO DETENTION FACILITY)
INFILTRATION TRENCH WITH PEA GRAVEL FILTER LAYER OVER WASHED BANK RUN GRAVEL AGGREGATE
OVERFLOW
PLAN VIEW
OVERFLOW BERM
OBSERVATION WELL WITH SCREW TOP LID
RUNOFF FILTERS THROUGH GRASS BUFFER STRIP (20' MINIMUM); GRASS CHANNEL; OR SEDIMENTATION VAULT
2" PEA GRAVEL FILTER LAYER
PROTECTIVE LAYER OF FILTER FABRIC
TRENCH 3-8 FEET DEEP FILLED WITH 1.5 - 2.5 INCH DIAMETER CLEAN STONE (BANK RUN GRAVEL PREFERRED)
SAND FILTER 6" DEEP (OR FABRIC EQUIVALENT)
RUNOFF EXFILTRATES THROUGH UNDISTURBED SUBSOILS WITH A MINIMUM RATE OF 0.5 INCHES PER HOUR
SECTION

Infiltration Trench TC-10

Maintenance Concerns, Objectives, and Goals

- Accumulation of Metals
- Clogged Soil Outlet Structures
- Vegetation/Landscape Maintenance

General Description

An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Pretreatment using buffer strips, swales, or detention basins is important for limiting amounts of coarse sediment entering the trench which can clog and render the trench ineffective.

Targeted Constituents

✓	Sediment	■
✓	Nutrients	■
✓	Trash	■
✓	Metals	■
✓	Bacteria	■
✓	Oil and Grease	■
✓	Organics	■

Legend ***(Removal Effectiveness)***

● Low ■ High

▲ Medium

Inspection/Maintenance Considerations

Frequency of clogging is dependant on effectiveness of pretreatment, such as vegetated buffer strips, at removing sediments. See appropriate maintenance factsheets for associated pretreatment. If the trench clogs, it may be necessary to remove and replace all or part of the filter fabric and possibly the coarse aggregate. Clogged infiltration trenches with surface standing water can become a nuisance due to mosquito breeding. Maintenance efforts associated with infiltration trenches should include frequent inspections to ensure that water infiltrates into the subsurface completely at a recommended infiltration rate of 72 hours or less to prevent creating mosquito and other vector habitats. Most of the maintenance should be concentrated on the pretreatment practices, such as buffer strips and swales upstream of the trench to ensure that sediment does not reach the infiltration trench. Regular inspection should determine if the sediment removal structures require routine maintenance. Infiltration trenches should not be put into operation until the upstream tributary area is stabilized.

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Inspection Activities	Suggested Frequency
■ Inspect after every major storm for the first few months to ensure proper functioning. Drain times should be observed to confirm that designed drain times has been achieved.	After construction
■ Inspect facility for signs of wetness or damage to structures, signs of petroleum hydrocarbon contamination, standing water, trash and debris, sediment accumulation, slope stability, standing water, and material buildup. ■ Check for standing water or, if available, check observation wells following 3 days of dry weather to ensure proper drain time. ■ Inspect pretreatment devices and diversion structures for damage, sediment buildup, and structural damage.	Semi-annual and after extreme events
■ Trenches with filter fabric should be inspected for sediment deposits by removing a small section of the top layer. If inspection indicates that the trench is partially or completely clogged, it should be restored to its design condition.	Annual
Maintenance Activities	**Suggested Frequency**
■ Repair undercut and eroded areas at inflow and outflow structures. ■ Remove sediment, debris, and oil/grease from pretreatment devices and overflow structures.	Standard maintenance (as needed)
■ Remove trash, debris, grass clippings, trees, and other large vegetation from the trench perimeter and dispose of properly. ■ Mow and trim vegetation to prevent establishment of woody vegetation, and for aesthetic and vector reasons.	Semi-annual, more often as needed
■ Clean out sediment traps, forebays, inlet/outlet structures, overflow spillway, and trenches if necessary. ■ Remove grass clippings, leaves, and accumulated sediment from the surface of the trench. Replace first layer of aggregate and filter fabric if clogging appears only to be at the surface. ■ Clean trench when loss of infiltrative capacity is observed. If drawdown time is observed to have increased significantly over the design drawdown time, removal of sediment may be necessary. This is an expensive maintenance activity and the need for it can be minimized through prevention of upstream erosion.	Annual
■ If bypass capability is available, it may be possible to regain the infiltration rate in the short term by providing an extended dry period. ■ Seed or sod to restore ground cover.	5-year maintenance
■ Total rehabilitation of the trench should be conducted to maintain storage capacity within 2/3 of the design treatment volume and 72-hour exfiltration rate limit. ■ Trench walls should be excavated to expose clean soil. ■ All of the stone aggregate and filter fabric or media must be removed. Accumulated sediment should be stripped from the trench bottom. At this point the bottom may be scarified or tilled to help induce infiltration. New fabric and clean stone aggregate should be refilled.	Upon failure

Additional Information

Infiltration practices have historically had a high rate of failure compared to other stormwater management practices. One study conducted in Prince George's County, Maryland (Galli, 1992), revealed that less than half of the infiltration trenches investigated (of about 50) were still functioning properly, and less than one-third still functioned properly after 5 years. Many of these practices, however, did not incorporate advanced pretreatment. By carefully selecting the location and improving the design features of infiltration practices, their performance should improve.

It is absolutely critical that settleable particles and floatable organic materials be removed from runoff water before it enters the infiltration trench. The trench will clog and become nonfunctional if excessive particulate matter is allowed to enter the trench.

Cold climate considerations – see http://www.cwp.org/cold-climates.htm

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Infiltration Basin

TC-11

Design Considerations

- Soil for Infiltration
- Slope
- Aesthetics

Targeted Constituents

☑	Sediment	■
☑	Nutrients	■
☑	Trash	■
☑	Metals	■
☑	Bacteria	■
☑	Oil and Grease	■
☑	Organics	■

Legend ***(Removal Effectiveness)***

● Low ■ High

▲ Medium

Description

An infiltration basin is a shallow impoundment that is designed to infiltrate stormwater. Infiltration basins use the natural filtering ability of the soil to remove pollutants in stormwater runoff. Infiltration facilities store runoff until it gradually exfiltrates through the soil and eventually into the water table. This practice has high pollutant removal efficiency and can also help recharge groundwater, thus helping to maintain low flows in stream systems. Infiltration basins can be challenging to apply on many sites, however, because of soils requirements. In addition, some studies have shown relatively high failure rates compared with other management practices.

California Experience

Infiltration basins have a long history of use in California, especially in the Central Valley. Basins located in Fresno were among those initially evaluated in the National Urban Runoff Program and were found to be effective at reducing the volume of runoff, while posing little long-term threat to groundwater quality (EPA, 1983; Schroeder, 1995). Proper siting of these devices is crucial as underscored by the experience of Caltrans in siting two basins in Southern California. The basin with marginal separation from groundwater and soil permeability failed immediately and could never be rehabilitated.

Advantages

- Provides 100% reduction in the load discharged to surface waters.
- The principal benefit of infiltration basins is the approximation of pre-development hydrology during which a

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significant portion of the average annual rainfall runoff is infiltrated and evaporated rather than flushed directly to creeks.

- If the water quality volume is adequately sized, infiltration basins can be useful for providing control of channel forming (erosion) and high frequency (generally less than the 2-year) flood events.

Limitations

- May not be appropriate for industrial sites or locations where spills may occur.
- Infiltration basins require a minimum soil infiltration rate of 0.5 inches/hour, not appropriate at sites with Hydrologic Soil Types C and D.
- If infiltration rates exceed 2.4 inches/hour, then the runoff should be fully treated prior to infiltration to protect groundwater quality.
- Not suitable on fill sites or steep slopes.
- Risk of groundwater contamination in very coarse soils.
- Upstream drainage area must be completely stabilized before construction.
- Difficult to restore functioning of infiltration basins once clogged.

Design and Sizing Guidelines

- Water quality volume determined by local requirements or sized so that 85% of the annual runoff volume is captured.
- Basin sized so that the entire water quality volume is infiltrated within 48 hours.
- Vegetation establishment on the basin floor may help reduce the clogging rate.

Construction/Inspection Considerations

- Before construction begins, stabilize the entire area draining to the facility. If impossible, place a diversion berm around the perimeter of the infiltration site to prevent sediment entrance during construction or remove the top 2 inches of soil after the site is stabililized. Stabilize the entire contributing drainage area, including the side slopes, before allowing any runoff to enter once construction is complete.
- Place excavated material such that it can not be washed back into the basin if a storm occurs during construction of the facility.
- Build the basin without driving heavy equipment over the infiltration surface. Any equipment driven on the surface should have extra-wide ("low pressure") tires. Prior to any construction, rope off the infiltration area to stop entrance by unwanted equipment.
- After final grading, till the infiltration surface deeply.
- Use appropriate erosion control seed mix for the specific project and location.

Performance

As water migrates through porous soil and rock, pollutant attenuation mechanisms include precipitation, sorption, physical filtration, and bacterial degradation. If functioning properly, this approach is presumed to have high removal efficiencies for particulate pollutants and moderate removal of soluble pollutants. Actual pollutant removal in the subsurface would be expected to vary depending upon site-specific soil types. This technology eliminates discharge to surface waters except for the very largest storms; consequently, complete removal of all stormwater constituents can be assumed.

There remain some concerns about the potential for groundwater contamination despite the findings of the NURP and Nightingale (1975; 1987a,b,c; 1989). For instance, a report by Pitt et al. (1994) highlighted the potential for groundwater contamination from intentional and unintentional stormwater infiltration. That report recommends that infiltration facilities not be sited in areas where high concentrations are present or where there is a potential for spills of toxic material. Conversely, Schroeder (1995) reported that there was no evidence of groundwater impacts from an infiltration basin serving a large industrial catchment in Fresno, CA.

Siting Criteria

The key element in siting infiltration basins is identifying sites with appropriate soil and hydrogeologic properties, which is critical for long term performance. In one study conducted in Prince George's County, Maryland (Galli, 1992), all of the infiltration basins investigated clogged within 2 years. It is believed that these failures were for the most part due to allowing infiltration at sites with rates of less than 0.5 in/hr, basing siting on soil type rather than field infiltration tests, and poor construction practices that resulted in soil compaction of the basin invert.

A study of 23 infiltration basins in the Pacific Northwest showed better long-term performance in an area with highly permeable soils (Hilding, 1996). In this study, few of the infiltration basins had failed after 10 years. Consequently, the following guidelines for identifying appropriate soil and subsurface conditions should be rigorously adhered to.

- Determine soil type (consider RCS soil type 'A, B or C' only) from mapping and consult USDA soil survey tables to review other parameters such as the amount of silt and clay, presence of a restrictive layer or seasonal high water table, and estimated permeability. The soil should not have more than 30% clay or more than 40% of clay and silt combined. Eliminate sites that are clearly unsuitable for infiltration.

- Groundwater separation should be at least 3 m from the basin invert to the measured ground water elevation. There is concern at the state and regional levels of the impact on groundwater quality from infiltrated runoff, especially when the separation between groundwater and the surface is small.

- Location away from buildings, slopes and highway pavement (greater than 6 m) and wells and bridge structures (greater than 30 m). Sites constructed of fill, having a base flow or with a slope greater than 15% should not be considered.

- Ensure that adequate head is available to operate flow splitter structures (to allow the basin to be offline) without ponding in the splitter structure or creating backwater upstream of the splitter.

- Base flow should not be present in the tributary watershed.

Secondary Screening Based on Site Geotechnical Investigation

- At least three in-hole conductivity tests shall be performed using USBR 7300-89 or Bouwer-Rice procedures (the latter if groundwater is encountered within the boring), two tests at different locations within the proposed basin and the third down gradient by no more than approximately 10 m. The tests shall measure permeability in the side slopes and the bed within a depth of 3 m of the invert.

- The minimum acceptable hydraulic conductivity as measured in any of the three required test holes is 13 mm/hr. If any test hole shows less than the minimum value, the site should be disqualified from further consideration.

- Exclude from consideration sites constructed in fill or partially in fill unless no silts or clays are present in the soil boring. Fill tends to be compacted, with clays in a dispersed rather than flocculated state, greatly reducing permeability.

- The geotechnical investigation should be such that a good understanding is gained as to how the stormwater runoff will move in the soil (horizontally or vertically) and if there are any geological conditions that could inhibit the movement of water.

Additional Design Guidelines

(1) Basin Sizing - The required water quality volume is determined by local regulations or sufficient to capture 85% of the annual runoff.

(2) Provide pretreatment if sediment loading is a maintenance concern for the basin.

(3) Include energy dissipation in the inlet design for the basins. Avoid designs that include a permanent pool to reduce opportunity for standing water and associated vector problems.

(4) Basin invert area should be determined by the equation:

$$A = \frac{WQV}{kt}$$

where A = Basin invert area (m^2)

WQV = water quality volume (m^3)

k = 0.5 times the lowest field-measured hydraulic conductivity (m/hr)

t = drawdown time (48 hr)

(5) The use of vertical piping, either for distribution or infiltration enhancement shall not be allowed to avoid device classification as a Class V injection well per 40 CFR146.5(e)(4).

Maintenance

Regular maintenance is critical to the successful operation of infiltration basins. Recommended operation and maintenance guidelines include:

- Inspections and maintenance to ensure that water infiltrates into the subsurface completely (recommended infiltration rate of 72 hours or less) and that vegetation is carefully managed to prevent creating mosquito and other vector habitats.
- Observe drain time for the design storm after completion or modification of the facility to confirm that the desired drain time has been obtained.
- Schedule semiannual inspections for beginning and end of the wet season to identify potential problems such as erosion of the basin side slopes and invert, standing water, trash and debris, and sediment accumulation.
- Remove accumulated trash and debris in the basin at the start and end of the wet season.
- Inspect for standing water at the end of the wet season.
- Trim vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and vector reasons.
- Remove accumulated sediment and regrade when the accumulated sediment volume exceeds 10% of the basin.
- If erosion is occurring within the basin, revegetate immediately and stabilize with an erosion control mulch or mat until vegetation cover is established.
- To avoid reversing soil development, scarification or other disturbance should only be performed when there are actual signs of clogging, rather than on a routine basis. Always remove deposited sediments before scarification, and use a hand-guided rotary tiller, if possible, or a disc harrow pulled by a very light tractor.

Cost

Infiltration basins are relatively cost-effective practices because little infrastructure is needed when constructing them. One study estimated the total construction cost at about $2 per ft (adjusted for inflation) of storage for a 0.25-acre basin (SWRPC, 1991). As with other BMPs, these published cost estimates may deviate greatly from what might be incurred at a specific site. For instance, Caltrans spent about $18/ft^3 for the two infiltration basins constructed in southern California, each of which had a water quality volume of about 0.34 ac.-ft. Much of the higher cost can be attributed to changes in the storm drain system necessary to route the runoff to the basin locations.

Infiltration basins typically consume about 2 to 3% of the site draining to them, which is relatively small. Additional space may be required for buffer, landscaping, access road, and fencing. Maintenance costs are estimated at 5 to 10% of construction costs.

One cost concern associated with infiltration practices is the maintenance burden and longevity. If improperly maintained, infiltration basins have a high failure rate. Thus, it may be necessary to replace the basin with a different technology after a relatively short period of time.

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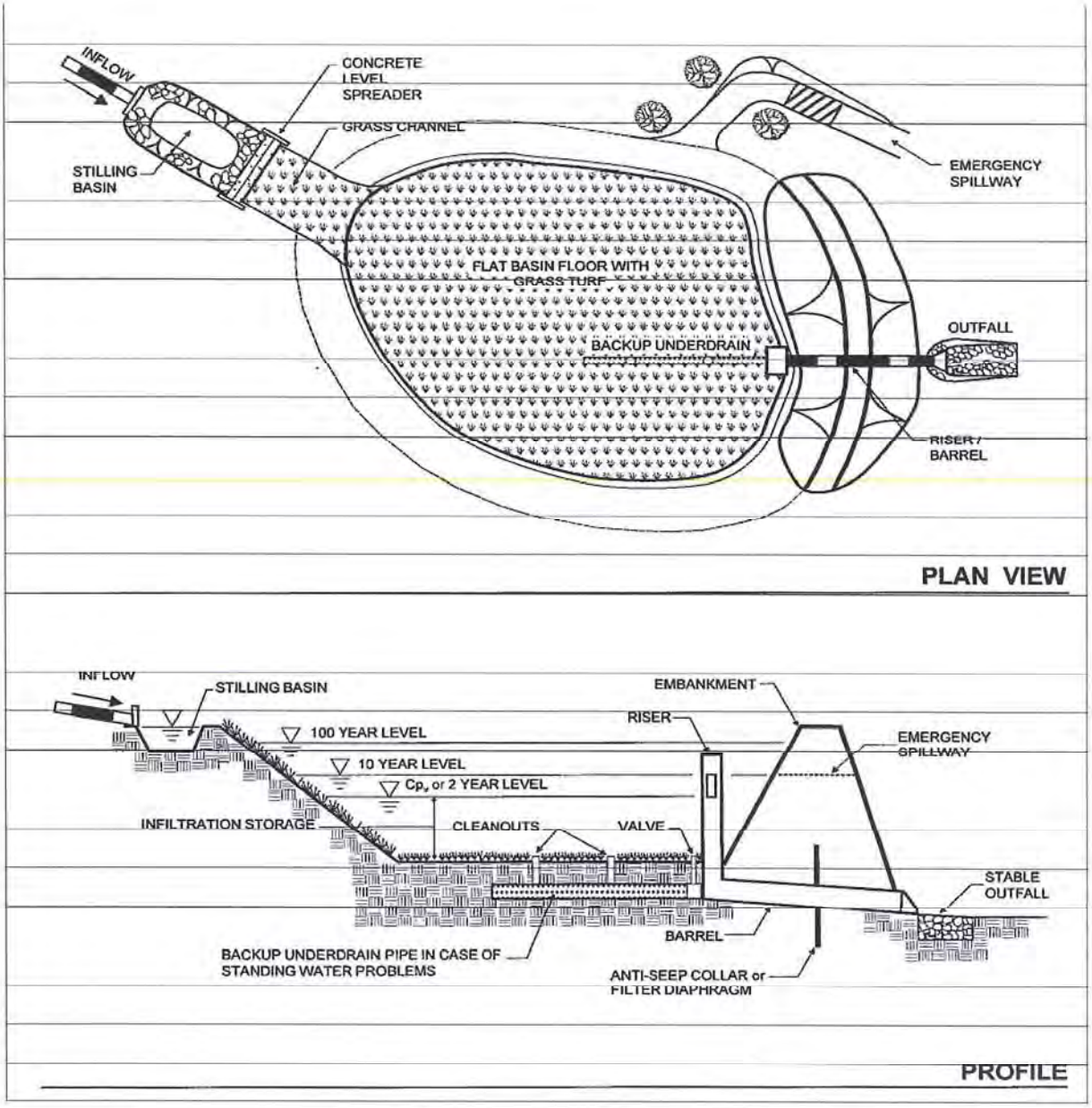
INFLOW
CONCRETE LEVEL SPREADER
GRASS CHANNEL
STILLING BASIN
EMERGENCY SPILLWAY
FLAT BASIN FLOOR WITH GRASS TURF
OUTFALL
BACKUP UNDERDRAIN
RISER / BARREL
PLAN VIEW
INFLOW
STILLING BASIN
EMBANKMENT
RISER
100 YEAR LEVEL
EMERGENCY SPILLWAY
10 YEAR LEVEL
Cp$_v$ or 2 YEAR LEVEL
INFILTRATION STORAGE
CLEANOUTS
VALVE
STABLE OUTFALL
BARREL
BACKUP UNDERDRAIN PIPE IN CASE OF STANDING WATER PROBLEMS
ANTI-SEEP COLLAR or FILTER DIAPHRAGM
PROFILE

Infiltration Basin TC-11

Maintenance Concerns, Objectives, and Goals

- Vector Control
- Clogged soil or outlet structures
- Vegetation/Landscape Maintenance
- Groundwater contamination
- Accumulation of metals
- Aesthetics

General Description

An infiltration basin is a shallow impoundment that is designed to infiltrate stormwater. Infiltration basins use the natural filtering ability of the soil to remove pollutants in stormwater runoff. Infiltration facilities store runoff until it gradually exfiltrates through the soil and eventually into the water table. This practice has high pollutant removal efficiency and can also help recharge groundwater, thus helping to maintain low flows in stream systems. Infiltration basins can be challenging to apply on many sites, however, because of soils requirements. In addition, some studies have shown relatively high failure rates compared with other management practices.

Targeted Constituents

✓	Sediment	■
✓	Nutrients	■
✓	Trash	■
✓	Metals	■
✓	Bacteria	■
✓	Oil and Grease	■
✓	Organics	■

Legend ***(Removal Effectiveness)***

● Low ■ High

▲ Medium

Inspection/Maintenance Considerations

Infiltration basins perform better in well-drained permeable soils. Infiltration basins in areas of low permeability can clog within a couple years, and require more frequent inspections and maintenance. The use and regular maintenance of pretreatment BMPs will significantly minimize maintenance requirements for the basin. Spill response procedures and controls should be implemented to prevent spills from reaching the infiltration system.

Scarification or other disturbance should only be performed when there are actual signs of clogging or significant loss of infiltrative capacity, rather than on a routine basis. Always remove deposited sediments before scarification, and use a hand-guided rotary tiller, if possible, or a disc harrow pulled by a light tractor. This BMP may require groundwater monitoring. Basins cannot be put into operation until the upstream tributary area is stabilized.

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Clogged infiltration basins with surface standing water can become a breeding area for mosquitoes and midges. Maintenance efforts associated with infiltration basins should include frequent inspections to ensure that water infiltrates into the subsurface completely (recommended infiltration rate of 72 hours or less) and that vegetation is carefully managed to prevent creating mosquito and other vector habitats.

Inspection Activities	Suggested Frequency
■ Observe drain time for a storm after completion or modification of the facility to confirm that the desired drain time has been obtained. ■ Newly established vegetation should be inspected several times to determine if any landscape maintenance (reseeding, irrigation, etc.) is necessary.	Post construction
■ Inspect for the following issues: differential accumulation of sediment, signs of wetness or damage to structures, erosion of the basin floor, dead or dying grass on the bottom, condition of riprap, drain time, signs of petroleum hydrocarbon contamination, standing water, trash and debris, sediment accumulation, slope stability, pretreatment device condition	Semi-annual and after extreme events
Maintenance Activities	**Suggested Frequency**
■ Factors responsible for clogging should be repaired immediately. ■ Weed once monthly during the first two growing seasons.	Post construction
■ Stabilize eroded banks. ■ Repair undercut and eroded areas at inflow and outflow structures. ■ Maintain access to the basin for regular maintenance activities. ■ Mow as appropriate for vegetative cover species. ■ Monitor health of vegetation and replace as necessary. ■ Control mosquitoes as necessary. ■ Remove litter and debris from infiltration basin area as required.	Standard maintenance (as needed)
■ Mow and remove grass clippings, litter, and debris. ■ Trim vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and vector reasons. ■ Replant eroded or barren spots to prevent erosion and accumulation of sediment.	Semi-annual
■ Scrape bottom and remove sediment when accumulated sediment reduces original infiltration rate by 25-50%. Restore original cross-section and infiltration rate. Properly dispose of sediment. ■ Seed or sod to restore ground cover. ■ Disc or otherwise aerate bottom. ■ Dethatch basin bottom.	3-5 year maintenance

Additional Information

In most cases, sediment from an infiltration basin does not contain toxins at levels posing a hazardous concern. Studies to date indicate that pond sediments are generally below toxicity limits and can be safely landfilled or disposed onsite. Onsite sediment disposal is always preferable (if local authorities permit) as long as the sediments are deposited away from the shoreline to prevent their reentry into the pond and away from recreation areas, where they could possibly be ingested by young children. Sediments should be tested for toxicants in compliance with current disposal requirements if land uses in the catchment include commercial or industrial zones, or if visual or olfactory indications of pollution are noticed. Sediments containing high levels of pollutants should be disposed of properly.

Light equipment, which will not compact the underlying soil, should be used to remove the top layer of sediment. The remaining soil should be tilled and revegetated as soon as possible.

Sediment removal within the basin should be performed when the sediment is dry enough so that it is cracked and readily separates from the basin floor. This also prevents smearing of the basin floor.

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Section 5
Monitoring, Reporting, and Program Evaluation

Conducting a monitoring program, reviewing the monitoring information, evaluating BMPs, and record keeping and reporting are all important elements of the implementation phase of the SWPPP. The success of the SWPPP depends upon the thorough implementation of the monitoring plan and evaluation of the effectiveness of the plan elements once they have been implemented.

Monitoring, Reporting, and Evaluation Elements

- Conduct monitoring program
- Conduct record keeping and reporting
- Conduct annual site evaluation
  - Review monitoring information
  - Evaluate BMPs
  - Review and revise the SWPPP as necessary

5.1 Conduct Monitoring Program

The General Permit requires that a monitoring program be a component of the SWPPP. The program has the following objectives:

- To monitor the quality of the stormwater discharge
- To aid in SWPPP implementation
- To measure the BMP effectiveness

To meet these objectives the monitoring effort has these elements:

- Training
- Visual observations
- Stormwater monitoring
- Authorized non-stormwater discharges

5.1.1 Training

Familiarity with the requirements of the stormwater monitoring plan and competence in the techniques and protocols specified in the plan are essential to ensure that stormwater samples are collected in a manner that meets the goals of the plan, while protecting the health and safety of the monitoring team members. It is recommended that all stormwater monitoring personnel receive training prior to conducting any stormwater monitoring activities. Stormwater monitoring training should include the following basic elements:

- Review of the Monitoring Plan and Health and Safety Plan

- Classroom training session
- Field training and sampling simulation (dry run)
- Annual refresher training

5.1.2 Visual Observations

Visual observations of both stormwater and non-stormwater discharges should be made at all facilities to document the presence of any discolorations, odors, floating and suspended material, oil and grease, etc., and to identify the source of any pollutants and non-stormwater flows. Visual observations should be made under the leadership of the SWPPP Leader, with appropriate members of the Pollution Prevention Team, according to the following schedule:

- All drainage areas within the facility should be checked for the presence of unauthorized non-stormwater discharges on a quarterly basis, during daylight hours, on days with no stormwater discharges.
- All authorized non-stormwater discharges and their sources should be observed quarterly during daylight hours, on days with no stormwater discharges.
- One storm event per month during the wet season (October 1-May 30) should be visually observed during the first hour of discharge at all discharge locations. These observations are only required of stormwater discharges that occur during daylight hours that are preceded by at least three working days without stormwater discharges and that occur during scheduled facility operating hours.

The results of the visual observations should be recorded and include: the date of the observation, locations observed, observations, response taken to eliminate unauthorized non-stormwater discharges, and actions taken to reduce or prevent pollutants from contacting non-stormwater or stormwater discharges. Results are included in the Annual Report.

5.1.3 Stormwater Monitoring

Each facility should either conduct an individual monitoring plan or participate in a group-sampling program. A group-monitoring program may be developed either by an entity representing a group of similar facilities or by a local stormwater agency that holds its own NPDES permit. According to the General Permit, the monitoring plan is to contain the rationale and description of the visual observation methods, location, and frequency; and the analytical methods and corresponding method detection limits used to detect constituents.

Selection of sites for industrial stormwater monitoring will depend on many factors including the following:

Representativeness

It is important to select sites that are representative of typical site operations.

- Runoff from the facility should combine to form a definable runoff stream.

- The runoff stream should represent the full range of activities at the facility.
- Runoff from the facility should not combine with runoff from other sources.
- Adequate flow volume must be available for sample collection.

Personal Safety

Development of a health and safety plan is recommended. Site selection should insure monitoring personnel from the following potential hazards:

- Traffic
- Uneven or slippery footing surface
- Poor night visibility (lighting)

Site Access

Ease of monitoring site access for monitoring personnel and vehicles parking is essential. Also, for sites that require installation of sample collection or flow metering equipment, adequate equipment access for maintenance and monitoring activities must be available.

Equipment Security

Permanently installed monitoring equipment must be located at a site that will minimize potential vandalism and other possible damage.

Adequate Flow Volume

Monitoring sites should be configured such that adequate flow volume is present for sample collection. Hydraulic conditions should be well mixed and free flowing.

Utility Access

If automated monitoring equipment is required, electrical power should be readily available at selected monitoring sites. Additionally, telephone service may be required for off-site station controlling and data transfer.

Stormwater samples should be collected during the first hour of discharge from (1) the first storm event of the wet season, and (2) at least one other storm event in the wet season. If the first event is missed, sampling of two events during the wet season is still required. Furthermore, a justification for failing to sample the first event should be provided in the Annual Report. Sample collection is only required of stormwater discharges that occur during scheduled facility operating hours and that are preceded by at least three working days without stormwater discharge. Sample collection is not required if dangerous weather conditions are present (e.g., flooding, electrical storm, etc.), when stormwater discharges begin after scheduled facility operating hours or when stormwater discharges are not preceded by three working days without discharge. When the required samples are not collected due to these exceptions, an explanation must be provided in the Annual Report. Visual observations and sample collection may be conducted more than one hour after discharge begins if it is determined that the

monitoring objectives will be better satisfied. If this occurs, an explanation should be provided in the Annual Report.

Specific sampling and analysis requirements include the following:

- All sampling and sample preservation should be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater".
- All monitoring instruments and equipment should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements.
- All laboratory analyses should be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified by the RWQCB.
- Analyze samples for total suspended solids (TSS), pH, specific conductance, and total organic carbon (TOC). Oil and grease (O&G) may be substituted for TOC.
- Analyze toxic chemicals and other pollutants that are likely to be present in stormwater discharges. Any of these pollutants that are not detected in significant quantities after two consecutive sampling events may be eliminated from future sampling analysis until the pollutant is likely to be present again. (According to the definitions section of the General Permit, "significant quantities" is defined as the volume, concentration, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water.)
- Other analytical parameters should be included based on the facility's standard industrial classification (see Table D of the General Permit).

Rules to Follow to Reduce Potential Sample Contamination

1. No smoking.
2. Never sample near a running vehicle. Do not park vehicles in immediate sample collection area (even non-running vehicles)
3. Always wear clean, powder-free nitrile gloves when handling composite bottles, lids, sterile grab sample bottles, tubing, or strainers.
4. Never touch the inside surface of a sample bottle or lid, even with gloved hands.
5. Never touch the exposed end of a sampling tube.
6. Never allow the inner surface of a sample bottle, lid, or sampling tube to be contacted by any material other than the sample water.
7. Never allow any object or material to fall into or contact the collected sample water.
8. Avoid allowing rain water to drip from rain gear or other surfaces into sample bottles.
9. Do not eat or drink during sample collection.
10. Do not breathe, sneeze or cough in the direction of an open sample bottle.

In addition to the requirements above, which are outlined in the General Permit, the following procedures are recommended to maximize the ability of sampling personnel to collect samples reliably and with minimal sample contamination.

- Before stormwater samples are collected, personnel must ensure the safety of such activities at each sampling location.
- Select the appropriate sample bottles and equipment for each parameter to be measured. As general guidelines, all sampling equipment and sample bottles used for trace metals determination should be nonmetallic and free from any material that may contain metals. Only high-density plastic or Teflon containers should be used for metals analytical sample storage bottles. All sampling equipment and sample bottles used for trace organics determination should be glass or Teflon. Nutrients and most "conventional" parameters may be sampled using plastic or glass bottles.
- Employ "clean" sampling techniques to minimize potential sources of sample contamination, particularly from trace pollutants. Experience has shown that when clean sampling techniques are used, detected concentrations of constituents tend to be lower.

5.2 Conduct Record Keeping and Reporting

Records of all stormwater monitoring information, inspections and visual observations, certifications, corrective actions and follow-up activities, and copies of all reports should be retained for a period of at least five years. These records should include:

- The date, place, and time of site inspections, sampling, visual observations, and measurements
- The individual(s) who performed the site inspections, sampling, visual observations, and measurements
- Flow measurements or estimates (as required by Section B.6 of the General Permit)
- The date and approximate time of analyses
- The individual who performed the analyses
- Analytical results, method detection limits, and the analytical techniques or methods used
- Quality assurance and quality control records and results
- Non-stormwater discharge inspections and visual observations and stormwater discharge visual observation records
- Visual observations and sample collection exception records
- All calibration and maintenance records of onsite instruments used

- All sampling and analysis exemption and reduction certifications and supporting documentation
- The records of any corrective actions and follow-up activities that resulted from the visual observations

It is also recommended that information regarding the rain event be collected. A nearby recording gage should be identified and used to document the start and stop times and date of precipitation event. Some industries may want to consider installing a recording gage at the monitoring site.

Photographs can be useful. Also keep a record of maintenance activities or any other BMPs that are of an "action" nature. It is easy to demonstrate that a BMP that involves a physical change, such as berming or covering, has been accomplished. But actions that relate to good housekeeping can only be demonstrated by record keeping. Keeping a record of catch basin cleaning, for example, also provides insight into how soon it takes for the catch basin sump to refill.

An Annual Report including the items listed below should be submitted by July 1 of each year to the Executive Officer of the appropriate RWQCB.

- Summary of visual observations and sampling results
- Evaluation of the visual observations and sampling and analysis results
- Documentation that the BMPs in the SWPPP are being implemented and properly maintained as necessary
- Laboratory reports (including detection limits for each analytical parameter)
- The Annual Comprehensive Site Compliance Evaluation Report (as described below)
- Documentation, including the justification, of any deviations from the General Permit requirements (if not already included in the Evaluation Report)
- Records
- Detection limits for each analytical parameter

5.3 Conduct Annual Site Evaluation

All facilities should conduct an annual comprehensive site compliance evaluation. It may be helpful to involve the Pollution Prevention Team (PPT) in this effort (see Section 2). The SWPPP should be revised within 90 days of the evaluation based on the evaluation and the revisions implemented. Evaluations should include the following:

- A review of the results of visual inspections of potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system

- A review of visual observation records, inspection records, and sampling and analysis results
- A review and evaluation of each BMP to determine whether it is adequate, properly implemented, and maintained
- A review of site activities to ascertain if change has occurred, and if so, whether new or modified BMPs are needed
- A review of the list of significant materials to ascertain if the list has changed, and if so, whether new or modified BMPs are needed
- A review of spills that have occurred over the past 12 months, with a determination of cause(s) and possible solutions, including modified or new BMPs
- A determination of whether each BMP must be modified, replaced, and whether additional BMPs are needed
- An evaluation report

APPENDIX K

Geotechnical Report

REPORT OF GEOTECHNICAL INVESTIGATION
PROPOSED BED TOWER EXPANSION

RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA AVENUE
RIVERSIDE, CALIFORNIA

Prepared for:

HCA MANAGEMENT SERVICES, L.P.

Nashville, Tennessee

February 28, 2013

Project 4953-13-0001

February 28, 2013

Mr. Bryan Seely
HCA Management Services, L.P.
One Park Plaza – Building 2 – Floor 3E
Nashville, Tennessee 37203

Subject: **LETTER OF TRANSMITTAL**
Report of Geotechnical Investigation
Proposed Bed Tower Expansion
Riverside Community Hospital
4445 Magnolia Avenue
Riverside, California
AMEC Project 4953-13-0001

Dear Mr. Seely:

We are pleased to submit the results of our geotechnical investigation for the proposed bed tower expansion to be constructed at the campus of the Riverside Community Hospital in Riverside, California. This investigation was conducted in accordance with our revised proposal dated December 4, 2012 and the agreement between the HCA Management Services, L.P. and AMEC Environment and Infrastructure, Inc. dated October 1, 2012, which was fully executed on December 19, 2012.

The scope of our services was planned with you and based on the request for proposal prepared by Perkins+Will dated September 5, 2012. Mr. Michael Doremus of KPFF Structural Engineers has provided us with structural features and structural loading information for the proposed bed tower expansion.

The results of our investigation and design recommendations are presented in this report. Please note that you or your representative should submit copies of this report to the appropriate governmental agencies for their review and approval prior to obtaining a building permit.

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It has been a pleasure to be of professional service to you. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,

AMEC Environment & Infrastructure, Inc.

Ethan Tsai
Technical Professional Engineer

Rosalind Munro
Associate Geologist

Reviewed By:

Mark A. Murphy
Associate Geotechnical Engineer
Project Manager

Marshall Lew, Ph.D.
Principal Engineer

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(2 copies submitted)

cc: (5) Perkins+Will
Attn: Ms. Kelly Whitney

(2) KPFF Structural Engineers
Attn: Mr. Aaron Reynolds

REPORT OF GEOTECHNICAL INVESTIGATION
PROPOSED BED TOWER EXPANSION

RIVERSIDE COMMUNITY HOSPITAL
4445 MAGNOLIA AVENUE
RIVERSIDE, CALIFORNIA

Prepared for:

HCA MANAGEMENT, L.P.

Nashville, Tennessee

AMEC

Los Angeles, California

February 28, 2013

Project 4953-13-0001

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EXECUTIVE SUMMARY

We have completed our geotechnical investigation of the site of the proposed bed tower expansion to be constructed at Riverside Community Hospital in Riverside, California. Our subsurface explorations, engineering analyses, and foundation design recommendations are summarized below.

Fill soils, up to 2 feet thick, were found in one of our prior borings. However, fill soils were not encountered during the current investigation. The fill soils consist of silt and sand and are not uniformly well compacted. Deeper fill could occur between borings, particularly within the site of the existing medical office building after it is demolished and where existing utilities are present. The natural soils consist generally of silt, silty sand, and sand and gravel. The upper natural soils are loose and medium stiff at present moisture content and may become somewhat weaker and more compressible when wet. The deeper sand and gravel deposits are dense to very dense. Groundwater was measured at a depth of approximately 31½ feet below the existing grade in one of our current borings (groundwater measurements were not possible in the second boring due to caving). Groundwater was measured at depths of between 20 and 23 feet in our prior borings drilled in 1985 at the site. The current and prior soil corrosivity test results indicate that the on-site soils are corrosive to ferrous metals, aggressive to copper, and that the potential for sulfate attack on portland cement concrete is considered negligible.

Based on the available geologic data, active or potentially active faults with the potential for surface fault rupture are not known to cross or project toward the site and the potential for surface fault rupture at the site is low. Therefore, the proposed project will not result in significant impacts related to surface fault rupture. The location of the site relative to known active or potentially active faults indicates the site could be subjected to significant ground shaking caused by earthquakes. This hazard is common in Southern California and the effects of ground shaking can be mitigated by proper engineering design and construction in conformance with current building codes and accepted engineering and construction practices. The site is relatively level and the absence of nearby slopes precludes slope stability hazards. The potential for other geologic hazards such as liquefaction, lateral spreading, subsidence, flooding, tsunamis, and seiches affecting the site is considered low.

The upper natural soils are loose and medium stiff and are not considered suitable for support of the proposed bed tower expansion on conventional spread footings. Therefore, the proposed structure may be supported on drilled cast-in-place concrete pile foundations or auger-cast pile foundations extending to the deeper dense to very dense sand and gravel.

Minor structures, such as loading dock walls, minor retaining walls, and free-standing walls, may be supported on conventional spread footings established on properly compacted fills. If the recommendations on grading are followed, the floor slab may be supported on grade.

As previously stated, the upper natural soils are loose and medium stiff at present moisture content and may become somewhat weaker and more compressible when wet. Therefore, we recommend that the floor slab, paving, and exterior concrete walks and slabs on grade be underlain by at least 2 feet of properly compacted fill soils.

1.0 SCOPE

This report provides geotechnical recommendations for the proposed bed tower expansion to be constructed at the campus of the Riverside Community Hospital in Riverside, California. The location of the site is shown on Figure 1, Vicinity Map. The location of the proposed bed tower expansion, existing buildings, and our prior exploration borings are shown on Figure 2, Plot Plan.

We previously performed a geotechnical investigation for the existing buildings near and at the project site and presented the results in a report dated September 16, 1985 (our Job No. A-85263, issued under the name of LeRoy Crandall and Associates, an AMEC legacy company). We acknowledge that we have reviewed the field data and the results of the laboratory tests performed by LeRoy Crandall and Associates and we concur with the data and findings.

This investigation was authorized to determine the static physical characteristics of the soils at the site of the proposed bed tower expansion, and to provide recommendations for design of foundations, for floor slab and paving support, and for grading. More specifically, the scope of our services included the following:

- Evaluate the current and prior subsurface explorations to determine the nature and stratigraphy of the subsurface soils beneath the subject site.
- Perform a geologic-seismic hazards evaluation in general conformance with Title 24 of the California Code of Regulations and with the California Geologic Survey Checklist for Review of Geologic-Seismic Reports for California Public Schools, Hospitals, and Essential Services Buildings (CGS Note 48) to address geologic and seismic hazard considerations.
- Provide site-specific response spectra in accordance with the requirements of the 2010 California Building Code (CBC) and ASCE 7-05.
- Provide the results of an earthquake time-history study in accordance with the requirements of the 2010 CBC.
- Provide recommendations for the necessary design parameters for the design of new foundations.
- Provide recommendations for floor slab support.

- Provide recommendations for the design of asphalt and portland cement concrete paving.
- Provide recommendations relating to earthwork.

The scope of this investigation did not include the assessment of general site environmental conditions for the presence of contaminants in the soils and groundwater of the site.

Our recommendations are based on the results of our current and prior field explorations, laboratory tests, and appropriate engineering analyses. The results of the current field exploration and laboratory tests, which, together with the data obtained during our prior investigation, form the basis of our recommendations, are presented in Appendix A. The results of our prior field explorations and laboratory tests are presented in Appendix B.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical consultants practicing in this or similar localities. No other warranty, express or implied, is made as to the professional advice included in this report. This report has been prepared for the HCA Management Services, L.P. and their design consultants to be used solely in the design of the proposed bed tower expansion at Riverside Community Hospital in Riverside, California. This report has not been prepared for use by other parties, and may not contain sufficient information for purpose of other parties or other uses.

2.0 PROJECT DESCRIPTION AND SITE CONDITIONS

The proposed project is to consist of the demolition of the existing parking structure and constructing an 8-story bed tower expansion. No subterranean levels are currently planned. The proposed bed tower expansion will be constructed immediately adjacent to the west of the existing Hospital Building C. The site of the proposed bed tower expansion will extend into an approximately 30-foot high slope, which extends downward toward the proposed project site from the existing Hospital Building C. A new retaining wall, which is currently planned to be structurally separate from the proposed bed tower expansion, will be constructed to expand the site to the east toward Hospital Building C. The new retaining wall is currently planned to consist of steel soldier piles placed in drilled holes that are backfilled with concrete and tied back with permanent earth anchors and a concrete facing.

The finished floor elevation (FFE) of the proposed bed tower expansion will be at Elevation 795. The maximum dead-plus-live column loads for the proposed bed tower expansion are estimated to be on the order of 1,000 kips. The maximum seismic uplift loads are anticipated to be on the order of 420 kips. The fundamental building period in both the north-south and east-west directions is approximately 1.5 seconds.

The eastern portion of the site is currently occupied by an existing medical office building. The existing parking structure was constructed into an approximately 30-foot high slope. The remaining portion of the site is currently occupied by a relatively flat asphalt concrete paved parking lot. The existing parking structure is supported on 24-inch diameter pile foundations. The existing Hospital Building C which has a lowest FFE at Elevation 827, is located adjacent to east of the existing medical office building and is supported on 24-inch diameter drilled pile foundations which range between 18 and 51 feet long.

3.0 EXPLORATIONS AND LABORATORY TESTS

The soil conditions beneath the site were recently explored by drilling two borings to a depth of about 50 feet below the existing grade. Data were also available from a prior investigation by LeRoy Crandall and Associates (an AMEC legacy firm), the results of which were submitted in a report dated September 16, 1985 (our Job No. A-85263). Four of the borings from our previous investigation were within the approximate footprint of the proposed structure. Details of the current explorations and the logs of the borings are presented in Appendix A. Logs of the prior relevant borings are presented in Appendix B.

Laboratory tests were performed on selected samples obtained from the borings to aid in the classification of the soils and to determine the pertinent engineering properties of the foundation soils. The following tests were performed:

- Moisture content and dry density determinations.
- Fines content.
- Direct shear.
- Consolidation.
- Hydroconsolidation.
- Corrosivity.

All testing was done in general accordance with applicable ASTM specifications at the time of testing. Details of the current laboratory testing program and test results are presented in Appendix A. The results of the prior relevant laboratory test are presented in Appendix B.

4.0 SOIL CONDITIONS

Fill soils, up to 2 feet thick, were found in one of our prior borings. However, fill soils were not encountered during the current investigation. The fill soils consist of silt and sand and are not uniformly well compacted. Deeper fill could occur between borings, particularly within the site of the existing medical office building after it is demolished and where existing utilities are present.

The natural soils consist generally of silt, silty sand, and sand and gravel. The upper natural soils are loose and medium stiff at present moisture content and may become somewhat weaker and more compressible when wet. The deeper sand and gravel deposits are dense to very dense.

Groundwater was measured at a depth of approximately 31½ feet below the existing grade in one of our current borings (groundwater measurements were not possible in the second boring due to caving). Groundwater was measured at depths of between 20 and 23 feet in our prior borings drilled in 1985 at the site.

The current and prior soil corrosivity test results indicate that the on-site soils are corrosive to ferrous metals, aggressive to copper, and that the potential for sulfate attack on portland cement concrete is considered negligible. The current test results are presented at the end of Appendix A. The prior corrosivity study is presented at the end of Appendix B.

5.0 GEOLOGY

5.1 GEOLOGIC SETTING

The site is located in northwestern Riverside County within the geologic structure known as the Perris block. The Perris block, an eroded mass of Cretaceous and older crystalline rock, includes the Chino Plain and is bounded by the San Jacinto fault and San Bernardino Valley on the northeast, by the Sierra Madre and Cucamonga fault zones and San Gabriel Mountains on the north, and by the Chino-Elsinore fault system and Santa Ana Mountains on the southwest (Woodford et al., 1971). Regionally, the project site is located within the northern Peninsular Ranges geomorphic province. The Peninsular Range province is characterized by northwest/southeast trending alignments of mountains and hills and intervening basins, reflecting the influence of northwest trending major faults and folds controlling the general geologic structural fabric of the region. This province extends northwesterly from Baja California into the Los Angeles Basin and westerly into the offshore area, including Santa Catalina, Santa Barbara, San Clemente and San Nicolas islands. It is bounded by the Colorado Desert along the San Jacinto fault zone on the east. The Los Angeles Basin and the San Bernardino Valley are the northernmost part of the Peninsular Ranges province bordering the Transverse Ranges geomorphic province.

Locally, the site is situated adjacent to the historic Santa Ana River tributary drainage of the Tequesquite Arroyo. As mapped by Morton and Cox (2001), the site is underlain by older alluvial fan deposits (Qof). The Santa Ana River is located about one mile northwest of the site. The site is at approximately Elevation 830 feet (NGVD29).

The topography of the area is shown on Figure 1, Vicinity Map. The local geology is shown on Figure 3, Local Geologic Map. A generalized geologic map of the region is shown on Figure 4, Regional Geologic Map. The site is shown in relation to major fault zones and earthquake epicenters on Figure 5, Regional Faults and Seismicity Map.

5.2 GEOLOGIC MATERIALS

Surficial materials in the site area have been mapped and described as Pleistocene older alluvial fan deposits (Morton and Cox, 2001). The borings from this investigation, drilled to

a maximum depth of 50 feet, indicate that the older alluvium at the site consists of alternating layers of silty sand and sand with varying amounts of gravel and cobbles.

5.3 GROUNDWATER

The project site is located in the Riverside-Arlington Subbasin of the Upper Santa Ana Valley groundwater basin (California Department of Water Resources, 2003). Records of depth to groundwater maintained by the State of California for Well No. 02S05W32B001S from 1955 to 1984 (located approximately 3 miles southwest of the site) indicate a groundwater depth of 47.0 feet, elevation of 730.8 feet (NGVD29) on December 20, 1984, the most recent groundwater level measurement. Groundwater was measured at 31.4 feet below the ground surface (bgs) in borings for this investigation. Our prior nearby geotechnical investigation encountered groundwater depths at the property ranging from 20 to 23 feet; and wells in the general vicinity (within 3700 feet) ranging from 36.2 to 30.8 feet.

5.4 FAULTS

The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (formerly the California Division of Mines and Geology) for the Alquist-Priolo Earthquake Fault Zoning Program (Bryant and Hart, 2007). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault is a fault that has demonstrated surface displacement of Quaternary age deposits (within the last 1.6 million years) but not Holocene deposits. Inactive faults have not moved in the last 1.6 million years. A list of nearby active faults (those included in CGS, 2008) and the distance in miles between the nearest point on the fault and the site, the maximum magnitude, and the slip rate for the fault, is given in Table 1. A similar list for potentially active faults is presented in Table 2. The faults in the vicinity of the site are shown in Figure 5. Note that blind thrust faults do not come to the surface therefore are not shown on Figure 5.

Active Faults

San Jacinto Fault Zone

The active San Jacinto fault zone, considered one of the most seismically active faults in Southern California, is located approximately 7.3 miles northeast of the site. This fault zone includes several en echelon branches or segments and displays many features characteristic of recent activity such as fault line scarps, sag ponds, and ground-water barriers. Historically, the San Jacinto fault zone has triggered a number of small to moderate-sized earthquakes and at least four large tremors of local magnitudes greater than 6.0. These four tremors were the Imperial Valley earthquake of May 18, 1940 (local magnitude of 7.1), the Borrego Mountain earthquake of April 9, 1968 (local magnitude of 6.5), and the November 23 and 24, 1987 Westmorland earthquakes (local magnitudes of 6.0 and 6.3, respectively). The Imperial Valley and the Borrego Mountain earthquakes occurred on the Imperial fault and the Coyote Creek fault, respectively, which are both considered to be part of the San Jacinto fault zone. The Westmorland earthquakes resulted from movement on the Superstition Hills fault, which is also considered to be part of the San Jacinto fault zone. The California Geological Survey (CGS, 2003) has assigned a maximum moment magnitude of 6.6 to 7.2 to the several segments of the San Jacinto fault zone. A maximum moment magnitude of 6.7 has been assigned to the closest portion, the San Bernardino section. Slip rate has approximated to be 6.0 mm/year (CGS, 2008).

Elsinore Fault Zone

The Elsinore fault zone is located approximately 14 miles to the southwest of the site. It is a major, but historically quiet, strike-slip fault zone striking southeastward at least 190 miles towards Mexico (USGS, 2013). The closest section, the Glen Ivy, strikes along the northeastern flank of the Santa Ana Mountains. Generally, the Elsinore fault zone dips steeply toward the southwest and displacement is both right-lateral and reverse-dip separation. The fault zone contains several parallel to sub-parallel fault segments, and characteristically occupies a trough-like depression. The Glen Ivy Section of the Elsinore fault has been assigned a slip rate of 5.0 mm/year (CGS, 2008) and a maximum moment magnitude of 6.8 (CGS, 2003).

Cucamonga Fault

The active Cucamonga fault is located approximately 14 miles north-northwest of the site. This fault zone borders the southern front of the San Gabriel Mountains and consists of an approximately ½ mile wide east-striking thrust fault complex. Although the east and west terminations of the Cucamonga fault are not well defined, the fault is generally considered to extend from San Antonio Canyon eastward to Lytle Creek. Along its 15½ mile extent, movement on the Cucamonga fault zone has created prominent fault scarps that disrupt Quaternary alluvial fans flanking the southern margin of the San Gabriel Mountains (Morton and Matti, 1987). Recent studies indicate alluvial deposits as young as 1,750 to 1,000 years old have been offset by the fault. Also, fault scarp morphology and relations with alluvial units suggest that the eastern 9 miles of the Cucamonga fault zone may have been more seismically active than the western portion over the last 4,000 years. The Cucamonga fault has been assigned a slip rate of 5.0 mm/year (CGS, 2008) and a maximum moment magnitude of 6.9 (CGS, 2003).

San Andreas Fault Zone

The active San Andreas fault zone is located about 15 miles northeast of the site. This fault zone, California's most prominent geological feature, trends generally northwest for almost the entire length of the state. The 1857 Fort Tejon earthquake was the last major earthquake along the San Andreas fault zone in Southern California. According to the California Geological Survey, the San Bernardino North Section of the San Andreas fault has a slip rate of 22 mm/yr and a maximum moment magnitude of 7.5.

Blind Thrust Fault Zones

Although buried thrust faults, commonly referred to as blind thrusts, are not known to underlie the Perris structural block, the Los Angeles Basin contains several at depth. These faults do not present a potential surface fault rupture hazard. However, the following described blind thrust faults are considered active and potential sources for future earthquakes.

Puente Hills Blind Thrust

The Puente Hills Blind Thrust fault (PHBT) is defined based on seismic reflection profiles, petroleum well data, and precisely located seismicity (Shaw et al., 2002). This blind thrust fault system extends eastward from downtown Los Angeles to Brea (in northern Orange County) and overlies the Elysian Park Thrust. The PHBT includes three north-dipping segments, named from east to west as the Coyote Hills segment, the Santa Fe Springs segment, and the Los Angeles segment. These segments are overlain by folds expressed at the surface as the Coyote Hills, Santa Fe Springs Anticline, and the Montebello Hills. The Santa Fe Springs segment of the PHBT is believed to be the causative fault of the October 1, 1987 Whittier Narrows Earthquake (Shaw et al., 2002). Postulated earthquake scenarios for the PHBT include single segment fault ruptures capable of producing an earthquake of moment magnitude 6.5 to 6.6 and a multiple segment fault rupture capable of producing an earthquake of moment magnitude 7.1 (M_w). The PHBT is not exposed at the ground surface and does not present a potential for surface fault rupture. However, based on deformation of late Quaternary age sediments above this fault system and the occurrence of the Whittier Narrows earthquake, the PHBT is considered an active fault capable of generating future earthquakes beneath the Los Angeles Basin. An average slip rate of 0.7 mm/year and a maximum moment magnitude of 7.1 are estimated by the California Geological Survey (CGS, 2008; 2003) for the Puente Hills Blind Thrust. The vertical surface projection of the postulated Puente Hills Blind Thrust is about 28 miles west of the site at the closest point.

San Joaquin Hills Thrust

Until recently, the southern Los Angeles Basin has been estimated to have a low seismic hazard relative to the greater Los Angeles region (Working Group on California Earthquake Probabilities, 1995). This estimation is generally based on the fewer number of known active faults and the lower rates of historic seismicity for this area. However, several recent studies by Grant et al. (2000, 2002) suggest that an active blind thrust fault system underlies the San Joaquin Hills. This postulated blind thrust fault is believed to be a faulted anticlinal fold, parallel to the Newport-Inglewood fault zone (NIFZ) but considered a distinctly separate seismic source (Grant et al., 2002). The recency of movement and Holocene slip rate of this fault are not known. However, the fault has been estimated to be capable of producing a Magnitude 6.8 to 7.3 earthquake (Grant et al.,

2002). This estimation is based primarily on coastal geomorphology and age-dating of marsh deposits that are elevated above the current coastline.

The vertical surface projection of the postulated San Joaquin Hills Thrust is about 30 miles southwest of the site at the closest point. This thrust fault is not exposed at the surface and does not present a potential surface fault rupture hazard. The California Geological Survey (2008; 2003) considers this postulated fault to be active and estimates an average slip rate of 0.5 mm/year and a maximum moment magnitude of 6.6 for the San Joaquin Hills Thrust.

Potentially Active Faults

Rialto-Colton

The Rialto-Colton fault is located about 6.8 miles northeast of the site. It is primary identified by a 7-mile long groundwater anomaly called the “Rialto-Colton barrier” according to Hart (1977) and Fife et al. (1976). The barrier is postulated to be a concealed fault that offsets groundwater in older alluvium at depths less than 200 feet (Hart, 1977). Structurally, the fault is presumed to be two vertical en-echelon strands striking approximately northwest (Ziony, 1985). Although the Rialto-Colton fault does not demonstrate any surface expression, it is estimated to be a total of 16 miles long (Ziony, 1985).

Central Avenue

The Central Avenue fault is located about 15 miles southwest of the site. The fault splays from the Elsinore fault zone and extends at least 5 miles northwestward along the eastern flank of the Puente Hills (Morton, 1976; Jennings and Bryant, 2010). The fault does not have any surface expression, but it parallels the Chino fault on its southern end and is primarily identified by groundwater barriers towards the north (Fife et al., 1976; Morton, 1976). According to Yeats (2002), the fault does not demonstrate any Quaternary activity and is presumed to be the hingeline between the Chino Basin and the Perris Block. The California Geological Survey and USGS currently considers this to fault to be potentially active (Jennings and Bryant, 2010). The Central Avenue fault has been listed in Table 1

because of research demonstrating it may be a northern extension of the active Chino fault (Dolan et al., 2001).

Seismicity

Earthquake Catalog Data

The seismicity of the region surrounding the proposed site was determined from research of an electronic database of seismic data (Southern California Earthquake Center, 2012). This database includes earthquake data compiled by the California Institute of Technology from 1932 through 2011 and data for 1812 to 1931 compiled by Richter and the U.S. National Oceanic Atmospheric Administration (NOAA). The search for earthquakes that occurred within 100 kilometers of the proposed site indicates that 627 earthquakes of magnitude 4.0 and greater occurred from 1932 through 2012; 4 earthquakes of magnitude 6.0 or greater occurred between 1906 and 1931; and 2 earthquakes of magnitude 7.0 or greater occurred between 1812 and 1905. A list of these earthquakes is presented as Table 3. Epicenters of some of the moderate and major earthquakes (greater than magnitude 5.0) are shown in Figure 5.

The information for each earthquake in the table includes date and time in Greenwich Civil Time (GCT), location of the epicenter in latitude and longitude, quality of epicentral determination (Q), depth in kilometers, distance from the site in kilometers, and magnitude. Where a depth of 0.0 is given, the solution was based on an assumed 16-kilometer focal depth. The explanation of the letter code for the quality factor of the data is presented on the first page of Table 3.

Historic Earthquakes

A number of earthquakes of moderate to major magnitude have occurred in the Southern California area within the last 113 years. A partial list of these earthquakes is included in the following table.

List of Historic Earthquakes

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Lytle Creek	July 22, 1899	5.9	15	N
San Bernardino Mtns.	September 20, 1907	5.8	22	NE
Lake Elsinore	May 15, 1910	6.0	19	SSW
San Jacinto-Hemet area	April 21, 1918	6.8	27	SSE
Loma Linda area	July 23, 1923	6.3	8	E
Long Beach	March 11, 1933	6.4	42	SW
Tehachapi	July 21, 1952	7.5	117	NW
San Fernando	February 9, 1971	6.6	65	NW
Whittier Narrows	October 1, 1987	5.9	40	W
Sierra Madre	June 28, 1991	5.8	40	NW
Landers	June 28, 1992	7.3	57	ENE
Big Bear	June 28, 1992	6.3	36	ENE
Northridge	January 17, 1994	6.7	68	WNW
Hector Mine	October 16, 1999	7.1	76	NE
Sierra El Mayor	April 4, 2010	7.2	183	SE

By: PER
Checked by: RM

5.5 GEOLOGIC HAZARDS

Fault Rupture

The site is not within a currently established Alquist-Priolo Earthquake Fault Zone for surface fault rupture hazards. The closest active fault to the site with the potential for surface fault rupture is the San Bernardino section of the San Jacinto fault located approximately 7 miles to northeast. The closest Alquist-Priolo Earthquake Fault Zone is for the San Bernardino section of the San Jacinto fault.

Based on the available geologic data, active or potentially active faults with the potential for surface fault rupture are not known to be located directly beneath or projecting toward the site. Therefore, the potential for surface rupture due to fault plane displacement propagating to the surface at the site during the design life of the proposed development is considered low.

Seismicity and Ground Shaking

The location of the site relative to known active or potentially active faults indicates the site could be subjected to significant ground shaking caused by earthquakes. This hazard is common in Southern California and the effects of ground shaking can be mitigated by proper engineering design and construction in conformance with current building codes and engineering practices.

Slope Stability

The majority of the site is relatively level. There are no known landslides at the site, nor is the site in the path of any known or potential landslides. The site is not within an area identified as having a potential for slope instability in the City of Riverside Public Safety Element (2012). The existing slope at the eastern end of the site will be modified/eliminated with the construction of a retaining wall. Recommendations for design of this retaining wall will be provided in an addendum to this report.

Liquefaction and Seismically-Induced Settlement

Liquefaction is the process in which loose granular soils below the groundwater table temporarily lose strength during strong ground shaking as a consequence of increased pore pressure and, thereby, reduced effective stress. The vast majority of liquefaction hazards are associated with sandy soils and silty soils of low plasticity (California Geological Survey, 2008). Potentially liquefiable soils (based on composition) must be saturated or nearly saturated to be susceptible to liquefaction (California Geological Survey, 2008).

According to the City of Riverside Public Safety Element (2012) and the Riverside County Land Information System (2013) the site is located within a liquefaction zone classified as “Medium to Very High.” Based on groundwater measurements from this and prior investigations, we have used a design groundwater level of 20 feet below the ground surface. However, since the on-site soils below a depth of 10 to 20 feet are in a dense to very dense state, the liquefaction potential at the site is considered to be low.

Seismically-induced settlement is often caused by loose to medium-dense granular soils densified during ground shaking. Uniform settlement beneath a given structure would cause minimal damage; however, because of variations in distribution, density, and confining conditions of the soils, seismic-induced settlement is generally non-uniform and can cause serious structural damage. Dry and partially saturated soils as well as saturated granular soils are subject to seismic-induced settlement. The upper soils beneath the site are only loose to medium dense; however, we estimate that the seismically-induced settlement will be on the order of ¼ inch or less.

Tsunamis, Inundation, and Seiches

The site located approximately 40 miles inland from the Pacific Ocean and at an elevation of around 830 feet (NGVD 29). The site is not within a potential tsunami inundation hazard zone and the risk of tsunami affecting the site is low.

According to the City of Riverside Public Safety Element, the site is in a dam inundation area from the Sycamore Canyon and Box Springs Dams (City of Riverside, 2012). Dams in California are continually monitored by various governmental agencies (such as the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers) to guard against the threat of dam failure. The possibility of dam failures during an earthquake has been addressed by the California Geological Survey in the earthquake planning scenarios for a magnitude 8.3 earthquake on the San Andreas fault zone (Davis et al., 1982) and a magnitude 7.0 earthquake on the Newport-Inglewood fault zone (Toppozada et al., 1988). As stated in both reports, catastrophic failure of a major dam as a result of a scenario earthquake is regarded as unlikely. Current design and construction practices, and ongoing programs of review, modification, or total reconstruction of existing dams are intended to ensure that all dams are capable of withstanding the maximum credible earthquake (MCE) for the site. Therefore, the potential for inundation at the Project Site as a result of an earthquake-induced dam failure is considered low.

The site is not located downslope of any large bodies of water that could adversely affect the site in the event of earthquake-induced seiches (wave oscillations in an enclosed or semi-enclosed body of water).

Flooding

According to the County of Riverside Land Information System (2013) and the City of Riverside Public Safety Element (2012), the site is not in a flood zone. Additionally, the site is not within a FEMA flood hazard zone.

Oil Wells and Methane Gas

According to the DOGGR Online Mapping System (DOMS) by the California Division of Oil, Gas, and Geothermal Resources (CDOGGR, 2013), the site is not situated in an oil field. Therefore, the potential for encountering hazardous amounts of methane will be low.

Subsidence

The site is not within an area documented to have experienced subsidence due to large scale groundwater withdrawal.

5.6 GEOLOGIC CONCLUSIONS

Based on the available geologic data, active or potentially active faults with the potential for surface fault rupture are not known to cross or project toward the site and the potential for surface fault rupture at the site is low. Therefore, the proposed project will not result in significant impacts related to surface fault rupture. The location of the site relative to known active or potentially active faults indicates the site could be subjected to significant ground shaking caused by earthquakes. This hazard is common in Southern California and the effects of ground shaking can be mitigated by proper engineering design and construction in conformance with current building codes and accepted engineering and construction practices.

The site is within an area identified as having a potential for liquefaction. However, the potential for liquefaction and significant seismically-induced settlement at the site is considered to be low.

There are no known landslides at the site, nor is the site in the path of any known or potential landslides. The site is not within an area identified as having a potential for slope instability or as having a potential for seismic slope instability.

The site is not within a tsunami or seiche hazard zone or flood zone and the risk of tsunami, seiche, or flooding affecting the site is low.

The City of Riverside designates the area as susceptible to inundation by the Sycamore Canyon and Box Springs dams. Current design and construction practices, and ongoing programs of review, modification, or total reconstruction of existing dams are intended to ensure that all dams are capable of withstanding the maximum credible earthquake (MCE) for the site. Therefore, the potential for inundation at the site as a result of an earthquake-induced dam failure is considered low.

The site is not in proximity to any known oil fields, nor near known oil wells. Hazardous amounts of methane in the subsurface are also not known to be near the site. Therefore, the potential for encountering oil field related hazards is considered low.

The site is not within an area documented to have experienced subsidence due to large scale groundwater withdrawal.

6.0 RECOMMENDATIONS

6.1 GENERAL

The upper natural soils are loose and medium stiff and are not considered suitable for support of the proposed bed tower expansion on conventional spread footings. Therefore, the proposed structure may be supported on pile foundations extending to the deeper dense to very dense sand and gravel.

Several types of pile foundations were considered for support of the proposed bed tower expansion, primarily driven piles, drilled displacement piles (screw piles), drilled cast-in-place concrete piles, and auger-cast piles. The use of driven piles would generate excessive noise and vibration during pile driving. Therefore, driven piles are not considered a feasible option adjacent to the existing hospital buildings. In addition, due to the gravel and cobble layers beneath the site, as encountered in our borings, the installation of drilled displacement piles is expected to be very difficult and refusal would be likely to occur prior to achieving design depths. Therefore, we recommend the use of drilled cast-in-place concrete piles for support of the proposed bed tower expansion. However, provisions to reduce the potential for caving, such as the use of casing and/or drilling mud, will be necessary during construction of drilled cast-in-place concrete piles. Alternatively, the proposed structure may be supported on auger-cast piles. However, for auger-cast piles, the installation of reinforcement steel will be more difficult for longer piles. In addition, the capacities of auger-cast piles, particularly the end-bearing component of the capacity, are more dependent on the quality of the construction methods and techniques utilized during installation. Therefore, a pile load testing program consisting of both pre-production and production load tests will be required to confirm the design pile capacities based on the construction methods utilized. Recommendations for design of both drilled cast-in-place concrete piles and auger-cast piles are presented herein.

The new pile foundations should be located so as to not directly conflict with the locations of the piles currently supporting the existing medical office building. The existing piles should be cut off to a depth of at least 2 feet below the bottom of the overlying new floor slab or new pile cap and be overlain by at least 2 feet of properly compacted fill soil.

Minor structures, such as loading dock walls, minor retaining walls, and free-standing walls, may be supported on conventional spread footings established on properly compacted fills. If the recommendations on grading are followed, the floor slab may be supported on grade.

As previously stated, the upper natural soils are loose and medium stiff at present moisture content and may become somewhat weaker and more compressible when wet. Therefore, we recommend that the floor slab, paving, and exterior concrete walks and slabs on grade be underlain by at least 2 feet of properly compacted fill soils. We also recommend that provisions for positive surface drainage away from the building be incorporated into the site grading plans. Impoundment of stormwater run-off within the construction area should not be permitted within the immediate vicinity of the building area. We also recommend avoiding the placement of planters, underground water pipes, or any other potential source of additional water to the subsurface soils in the immediate vicinity of the building. If possible, we recommend that planter and landscaped areas be placed at least 15 feet away from the proposed bed tower expansion. Hardscape and paving with proper surface drainage should be provided within the 15-foot strip. If planter or lawn areas adjacent to the building are desired, these areas should have impermeable bottoms. In addition, we recommend pressure testing of utility lines prior to backfilling to detect and eliminate leaks due to poor workmanship or material defects. Utility lines should again be pressure tested after major seismic events so that any necessary repairs could be performed. Utility lines should also be provided with proper corrosion protection. To substantially reduce the risk of leaking utility lines, all fluid-conveying utilities, except for sewer lines, could be installed above ground.

6.2 FOUNDATIONS

Drilled Cast-in-Place Concrete Piles

Vertical Capacities

We have estimated the axial capacities of drilled cast-in-place concrete piles based on the strength characteristics of the on-site soils. The ultimate downward and upward capacities of 24-, 30-, and 36-inch-diameter drilled piles are presented on Figures 6.1 and 6.2, respectively. The allowable capacities may be obtained by dividing the indicated value by

a factor of safety of 2.0 or the structural overstrength factor, which is greater. These allowable capacities are dead-plus-live load capacities; a one-third increase may be used when considering wind or seismic loads. The weight of concrete in the piles may be taken as 50 pounds per cubic foot when determining the axial loads.

Piles in groups should be spaced at least 3 diameters on centers. If the piles are so spaced, no reduction in the axial capacities need be considered due to group action. If the pile spacing is less than 3 diameters, a group efficiency factor, defined as the perimeter of the pile group divided by the sum of the circumferences of all of the individual piles in the group, may be used.

Settlement

We estimate the settlement of the proposed building, supported on drilled piles in the manner recommended, to be less than ½ inch. Differential settlement between adjacent columns is anticipated to be less than ¼ inch.

Lateral Loads

Lateral loads may be resisted by the piles, by friction between the floor slab and the supporting soils, and by the passive resistance of the soils against pile caps and grade beams. The resistance of the piles, the frictional resistance, and the passive resistance of the soils against pile caps and grade beams may be combined without reduction in determining the total lateral resistance.

We have computed the lateral capacities of the drilled piles using the computer program LPILE Plus by ENSOFT, Inc. Resistance of the soils adjacent to 24-, 30-, and 36-inch-diameter drilled piles are shown in the following tables for top of pile deflections of ¼ and ½ inches. These resistances have been calculated assuming both fixed- and free-head pile conditions. The lateral resistance of other sizes of piles may be assumed to be proportional to the pile diameter. The minimum pile length may be taken as the length required to reach the depth of zero moment given in the tables below.

Lateral Load Design Data
24-inch Drilled Concrete Pile

	Pile Head Deflection (inches)			
	¼		½	
Pile Head Condition	**Free**	**Fixed**	**Free**	**Fixed**
Lateral Load (kips)	15	45	30	85
Maximum Moment (in-kips)	960	3,110	1,915	6,160
Depth to Maximum Moment (ft)	8	0	8	0
Depth to Zero Moment (ft)	20	22	20	22

Lateral Load Design Data
30-inch Drilled Concrete Pile

	Pile Head Deflection (inches)			
	¼		½	
Pile Head Condition	**Free**	**Fixed**	**Free**	**Fixed**
Lateral Load (kips)	25	70	45	140
Maximum Moment (in-kips)	1,830	5,845	3,660	11,630
Depth to Maximum Moment (ft)	12	0	12	0
Depth to Zero Moment (ft)	24	26	24	26

Lateral Load Design Data
36-inch Drilled Concrete Pile

	Pile Head Deflection (inches)			
	¼		½	
Pile Head Condition	**Free**	**Fixed**	**Free**	**Fixed**
Lateral Load (kips)	35	105	70	210
Maximum Moment (in-kips)	3,230	9,870	6,460	19,690
Depth to Maximum Moment (ft)	13	0	13	0
Depth to Zero Moment (ft)	26	29	26	29

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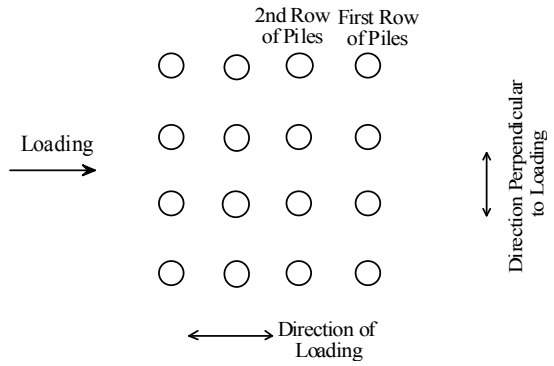
For piles in groups spaced as shown below and at least 3 pile diameters on centers, no reduction in the lateral capacities need be considered for the first (leading) row of piles in the direction perpendicular to loading. For subsequent rows in the direction of loading, piles in groups spaced closer than 8 pile diameters on centers will have a reduction in lateral capacity due to group effects. Therefore, the lateral capacity of piles in groups, except for the first row of piles, spaced at 3 pile diameters on centers, may be assumed to

be reduced by half. The reduction of lateral capacity in the direction of loading for other pile spacing may be interpolated.



A coefficient of friction of 0.4 may be used between the floor slab and the supporting soils. The passive resistance of properly compacted fill and/or undisturbed natural soils against pile caps and grade beams may be assumed to be equal to the pressure developed by a fluid with a density of 250 pounds per cubic foot. A one-third increase in the passive value may be used for wind or seismic loads.

Drilled Pile Installation

Caving was observed during our prior field explorations, some of which were drilled with bucket-type drilling equipment above the groundwater level. In addition, caving should be anticipated within the sandy deposits, particularly below groundwater. Therefore, provisions to reduce the potential for caving, such as the use of casing and/or drilling mud, will be necessary during the drilling of the pile excavations and placing of concrete.

Piles spaced less than five diameters on center should be drilled and filled alternately, with the concrete permitted to set at least 8 hours before drilling an adjacent hole. The pile installation should be completed the same day that the drilling is performed. A collar should be placed around the mouth of the shaft after drilling to prevent soils from entering the excavation, and the pile shafts should be covered until concrete is placed.

Concrete should be pumped from the bottom up through a rigid pipe extending to the bottom of the drilled excavation, with the pipe being slowly withdrawn as the concrete level rises. The discharge end of the pipe should be at least 5 feet below the surface of

the concrete at all times during placement. The concrete pump pressure should be at least 200 pounds per square inch. The discharge pipe should be kept full of concrete during the entire placing operation and should not be removed from the concrete until all of the concrete is placed and fresh concrete appears at the top of the pile. The volume of concrete pumped into the hole should be recorded and compared to design volume.

Only competent drilling contractors with experience in the installation of drilled cast-in-place piles in similar soil and groundwater conditions should be considered for the pile construction. The drilling of the pile excavations and the placing of the concrete should be observed continuously by personnel of our firm to verify that the desired diameter and depth of piles are achieved.

Auger-Cast Piles

We understand that the specialty contractor who installs auger-cast piles will also design the piles for the project. When available, the axial and lateral capacities used in the design should be submitted to us for our review and concurrence.

We recommend that the following soil parameters be used for the design of the auger-cast piles.

Layer No.	Top of Layer (feet)	Unit Weight (pcf)	Cohesion (psf)	Friction Angle (degrees)
1	0	120	0	26
2	12	120	300	37
Design Groundwater Elevation=			Elevation 775	

For auger-cast piles of similar type, size, and relative length, at least one sacrificial pre-production auger-cast pile should be installed and tested. In addition, at least four pre-production load tests should be performed, two in compression (in accordance with ASTM D1143) and two in tension (in accordance with ASTM D3689), to confirm that the design pile lengths are capable of resisting the ultimate load demand. At least five percent of all production piles shall be proof tested in accordance with ASTM D4945 to confirm that the installed pile lengths are capable of resisting the ultimate load demand.

Only competent drilling contractors with experience in the installation of auger-cast piles in similar soil and groundwater conditions should be considered for the pile construction. We suggest requesting the piling contractor to submit a list of similar projects along with references for each project.

The installation and testing of the auger-cast piles should be observed by our personnel to verify that the desired diameter, depth, and capacity of piles are achieved.

Spread Footings – Minor Structures

Bearing Value

Footings for minor structures (loading dock walls, minor retaining walls, and free-standing walls) that are structurally separate from the proposed bed tower expansion, underlain by at least 2 feet of properly compacted fill soils, and established at least 2 feet below the lowest adjacent grade or floor level may be designed to impose a net dead-plus-live load pressure of 1,500 pounds per square foot. The excavations should be deepened as necessary to extend into satisfactory soils, as determined by a representative of our firm.

A one-third increase may be used for wind or seismic loads. The recommended bearing value is a net value, and the weight of concrete in the footings may be taken as 50 pounds per cubic foot; the weight of soil backfill may be neglected when determining the downward loads.

Settlement

We estimate the settlement of the minor structures, supported on spread footings in the manner recommended, will be less than ½ inch.

Lateral Resistance

Lateral loads may be resisted by soil friction and by the passive resistance of the soils. A coefficient of friction of 0.4 may be used between the footings and the floor slab and the

supporting soils. The passive resistance of natural soils or properly compacted fill soils may be assumed to be equal to the pressure developed by a fluid with a density of 250 pounds per cubic foot. A one-third increase in the passive value may be used for wind or seismic loads. The frictional resistance and the passive resistance of the soils may be combined without reduction in determining the total lateral resistance.

Modulus of Subgrade Reaction

For structural analyses of conventional spread footings supported in the manner recommended, an average vertical modulus of subgrade reaction of 150 pounds per cubic inch may be used. This value is a unit value for use with a 1-foot-square area. The modulus should be reduced in accordance with the following equation when used with the larger foundations:

$$K_R = K\left[\frac{B+1}{2B}\right]^2$$

where:

K	=	unit subgrade modulus
K_R	=	reduced subgrade modulus
B	=	foundation width

Ultimate Values

The recommended bearing and lateral load design values stated above are for use with loadings determined by a conventional working stress design. When considering an ultimate design approach, the recommended design values shall be multiplied by the following factors:

Design Item	Ultimate Design Factor
Bearing Value	3.0
Passive Pressure	1.5
Coefficient of Friction	1.5

Note that the ultimate design factors for passive pressure and coefficient of friction are also applicable to these values given in the section for drilled cast-in-place concrete piles.

In no event, shall foundation sizes be less than those required for dead-plus-live loads when using the working stress design values.

Pole-Type Foundations

General

The recommendations in the preceding section on drilled cast-in-place pile foundations may also be used for the design of the foundations for pole-type structures. Alternatively, the more simplified approach given in Section 1807A.3 of the 2010 CBC (Pole Formula) may be used. Design parameters for this simplified procedure are presented below.

Axial Capacity

The downward capacity of short drilled cast-in-place concrete piles supporting pole-type structures may be estimated assuming a uniform friction value of 150 pounds per square foot for the portion of the pile extending into natural soils. A uniform friction value of 75 pounds per square foot may be used for the portion of the pile extending into natural soils to estimate the upward capacity of the piles. A one-third increase in the friction value may be used for support of wind or seismic loads. The uniform friction values above should be ignored within uncertified fill soils and within 2 feet of the ground surface surrounding the pile, whichever is deeper.

Settlement

We estimate that the static settlement of pole-type structures, supported in the manner recommended, will be less than ¼ inch.

Lateral Resistance

For computing the lateral resistance of the short drilled piles, the Pole Formula in the current CBC may be used. When using the Pole Formula, the lateral resistance of the natural soils may be assumed to be equal to the pressure developed by a fluid with a density of 500 pounds per cubic foot up to a maximum of 5,000 pounds per square foot. A one-third increase in the lateral resistance may be used when considering wind or seismic

loads. The lateral resistance within uncertified fill soils and within 2 feet of the ground surface surrounding the pile, whichever is deeper, should be ignored.

All backfill soils and additional fill soils placed at the locations of the poles should be properly compacted in accordance with the Grading Section of this report.

Pole-Type Foundation Installation

The drilled piles installation recommendations presented in the preceding section are also applicable to pole-type foundations.

6.3 DYNAMIC SITE CHARACTERISTICS

Seismic Design Parameters

We have determined the seismic parameters in accordance with the Section 1613 of the 2010 edition of the CBC and Section 11.4 of ASCE 7-05 Standard (ASCE, 2005) using the United States Geological Survey program, U.S. Seismic Design Maps Web Application (USGS, 2012). The CBC Site Class was determined to be Site Class “D” based on the results of our explorations, the shear wave velocities measured during a prior investigation for nearby project, and a review of the local geologic conditions. The mapped seismic parameters may be taken as presented in the following table:

Parameter	Mapped Value
S_S (0.2 second period, Site Class B)	1.5g
S_1 (1.0 second period, Site Class B)	0.6g
Site Class	D
F_a	1.0
F_v	1.5
$S_{MS} = F_a S_S$ (0.2 second period)	1.5g
$S_{M1} = F_v S_1$ (1.0 second period)	0.9g
$S_{DS} = 2/3 \times S_{MS}$ (0.2 second period)	1.0g
$S_{D1} = 2/3 \times S_{M1}$ (1.0 second period)	0.6g

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Site-Specific Response Spectra

We have performed a Probabilistic Seismic Hazard Analyses (PSHA) and a Deterministic Seismic Hazard Analyses (DSHA) using the computer program EZ-FRISK (Risk Engineering, 2011) in order to develop site-specific response spectra in accordance with the 2010 CBC and Chapter 21 of ASCE 7-05. For the DSHA, a composite deterministic response spectrum was compiled from the maximum of the 84th percentile spectral ordinates computed for known nearby faults. In addition to known fault sources, background seismicity was also included in the PSHA. To determine the maximum rotated component of ground motion, the probabilistic and deterministic ground motions were modified by the procedure by Huang, Whittaker and Luco (2008) to determine the ground motions for design.

The site-specific probabilistic and deterministic response spectra were developed using the average ground motions obtained from the Next Generation Attenuation (NGA) relationships of Abrahamson and Silva (2008), Boore and Atkinson (2008), Campbell and Bozorgnia (2008) and Chiou and Youngs (2008). For all four NGA relationships, we have used an average shear wave velocity in the upper 30 meters equal to 339 meters per second as measured during a prior investigation for nearby project. We have used a depth to a shear wave velocity of 1,000 meters per second beneath the site ($Z_{1.0}$) of 550 meters. We have estimated a depth to a shear wave velocity of 2,500 meters per second ($Z_{2.5}$) of 1 kilometer based on the available geologic data. To account for the uncertainty in the ground motion attenuation relationships, each relationship was integrated to three standard deviations beyond the median.

In accordance with Chapter 21 of ASCE 7-05, the probabilistic Maximum Considered Earthquake (MCE) response spectrum was taken as response spectrum of the ground motions with a 2% probability of being exceeded in 50 years. ASCE 7-05 defines the deterministic MCE response spectrum as the maximum of the composite deterministic response spectrum and the deterministic lower limit, as defined on Figure 21.2-1 of ASCE 7-05. The site-specific MCE response spectrum was then taken as a composite of the probabilistic and deterministic MCE response spectra, determined as described above, which consisted of the lesser of the spectral ordinates between the two spectra. The site-specific MCE response spectrum for 5% of critical structural damping is presented on

Figure 7.1. The site-specific design response spectrum was computed by multiplying the ordinates of the site-specific MCE response spectrum by two-thirds, with a lower limit at all periods of 80% of the spectral ordinates of the design response spectrum in ASCE 7-05. The site-specific design response spectrum for 5% of critical structural damping is presented on Figure 7.2. The components of the 5% damped site-specific MCE and design response spectra are also shown on Figures 7.1 and 7.2, respectively. The site-specific MCE and design earthquake response spectra in digitized form are shown on Tables 4 and 5.

Based on the results of our analyses, the site-specific design acceleration parameters, as defined in Section 21.4 of ASCE 7-05, S_{DS} and S_{D1}, may be taken as 1.00 and 0.98, respectively, and the site-specific MCE acceleration parameters, S_{MS} and S_{M1}, may be taken as 1.50 and 1.47, respectively.

Spectrum-Matched Time Histories

We performed spectral matching for ten selected time-histories for the site-specific MCE response spectrum in accordance with Section 16.1.3.2 of ASCE 7-05 and Section 1615A.1.25 of 2010 CBC using the computer program EZ-FRISK (Risk Engineering, 2011). The fundamental period provided by KPFF Consulting Engineers for the proposed bed tower expansion is approximately 1.5 seconds. The periods of interest considered were taken between 0.2 and 1.5 times 1.5 seconds in accordance with Section 1615A.1.25 of 2010 CBC. Therefore, this corresponds approximately to a period range of 0.3 to 2.3 seconds. The time histories selected for matching are presented in Table 6. These records were selected based on the following factors: geologic and soil characteristics and inclusion of strong directivity or near-source ground motions. In addition, the orientation of these records was also rotated to the fault normal and fault parallel components corresponding to the recorded event prior the matching process.

The acceleration, velocity, and displacement time histories for both the original records and records matched to the MCE response spectra, as described in Appendix C, are presented on Figures 8.1a and 8.1b through 8.10a and 8.10b. Each time history was matched using the 5% damped spectrum. Digital data with the spectrum-matched time histories are provided in the enclosed compact disc.

For ease of reference, the figure numbers corresponding to the plots of the pseudospectral acceleration and time histories for the MCE are presented in the table below.

Earthquake	Record	Fault Normal	Fault Parallel
Imperial Valley	El Centro Array #12	Figures 8.1a	Figures 8.1b
Imperial Valley	Westmorland Fire Sta	Figures 8.2a	Figures 8.2b
Superstition Hills	El Centro Imp. Co. Cent	Figures 8.3a	Figures 8.3b
Superstition Hills	Wildlife Liquef. Array	Figures 8.4a	Figures 8.4b
Landers	Barstow	Figures 8.5a	Figures 8.5b
Landers	North Palm Springs	Figures 8.6a	Figures 8.6b
Kobe	OSAJ	Figures 8.7a	Figures 8.7b
Kocaeli	Iznik	Figures 8.8a	Figures 8.8b
Hector Mine	North Palm Springs Fire Sta #36	Figures 8.9a	Figures 8.9b
Denali	R109 (temp)	Figures 8.10a	Figures 8.10b

Based on the results of hazard deaggregation, which is presented in Appendix C, the governing earthquake for both the MCE and design earthquake are practically identical. Therefore, we recommend the matched time histories for design earthquake level may be computed by multiplied the matched time histories for MCE by a factor of ⅔.

The details of the spectrum-matched time histories are presented in Appendix C.

6.4 FLOOR SLAB SUPPORT

If the subgrade is prepared as recommended in the following section on grading, the building floor slab may be supported on grade. However, we recommend that the floor slab be underlain by at least 2 feet of properly compacted fill soils.

Concrete slabs in areas to receive vehicular loading, such as the loading dock area, should be designed in accordance with the recommendations in Section 6.6. The actual thicknesses and reinforcing details of floor slabs and other concrete walks and slabs on grade not designed to receive traffic loading should be determined by the structural or civil engineer for the project. No special reinforcement or thickness requirements are necessary from a geotechnical standpoint; however, we suggest that floor slabs on grade be at least 4 inches thick with at least #3 reinforcing bars located at 16 inches on center each way.

Construction activities and exposure to the environment can cause deterioration of the prepared subgrade. Therefore, we recommend our that our field representative observe the condition of the final subgrade soils immediately prior to slab-on-grade construction, and, if necessary, perform further density and moisture content tests to determine the suitability of the final prepared subgrade.

If vinyl or other moisture-sensitive floor covering is planned, we recommend that the floor slab in those areas be underlain by a capillary break consisting of a vapor-retarding membrane over a 4-inch-thick layer of gravel. A 2-inch-thick layer of sand should be placed between the gravel and the membrane to decrease the possibility of damage to the membrane. We suggest the following gradation for the gravel:

Sieve Size	Percent Passing
¾”	90 - 100
No. 4	0 - 10
No. 100	0 - 3

A low-slump concrete should be used to reduce possible curling of the slab. A 2-inch-thick layer of coarse sand can be placed over the vapor retarding membrane to reduce slab curling. If this sand bedding is used, care should be taken during the placement of the concrete to prevent displacement of the sand. The concrete slab should be allowed to cure properly before placing vinyl or other moisture-sensitive floor covering. The sand and gravel layers should not be considered part of the required compacted fill layer under concrete slabs.

6.5 MINOR RETAINING WALLS AND ELEVATOR PIT WALLS

General

Recommendations for the planned tied back soldier pile retaining wall adjacent to the existing Hospital Building C will be provided in an addendum. Recommendations are provided below for minor site retaining walls and elevator pit walls.

Lateral Earth Pressure

For design of minor cantilevered retaining walls, where the surface of the backfill is level, it may be assumed that drained soils will exert a lateral pressure equal to that developed by a fluid with a density of 35 pounds per cubic foot. In addition to the recommended earth pressure, the walls should be designed to resist any applicable surcharges due to foundation or storage loads.

As required by the 2010 CBC, braced walls below grade, such as elevator pit walls, must be designed to resist at-rest earth pressures. Accordingly, for the case where the grade is level behind the walls, a triangular distribution of lateral earth pressure equivalent to that developed by a fluid with a density of 65 pounds per cubic foot plus any surcharge loadings occurring as a result of adjacent foundations, should be used.

In addition to the recommended earth pressures, walls adjacent to areas subject to vehicular traffic should be designed to resist a uniform lateral pressure of 100 pounds per square foot, acting as a result of an assumed 300 pounds per square foot surcharge behind the walls due to normal vehicular traffic. If the traffic is kept back at least 10 feet from the walls, the traffic surcharge may be neglected.

Seismic Lateral Earth Pressure

Based on the anticipated height of the walls (less than 5 feet), the soils types encountered in our borings, and the anticipated level of shaking, we anticipate that the seismic lateral earth pressure will be negligible.

Drainage

Minor retaining walls and elevator pit walls should be designed to resist hydrostatic pressures or be provided with drainage. Drainage could consist of a 4-inch-diameter perforated pipe placed with perforations down at the base of the wall. The pipe should be sloped at least 2 inches in 100 feet and surrounded by ¾-inch crushed rock or gravel separated from the on-site soils by an appropriate filter fabric. The crushed rock or gravel should have less than 5% passing a No. 200 sieve. In any event, elevator pit walls and

mats should be waterproofed. The performance of the waterproofing will be improved if drainage is also provided as discussed above.

6.6 PAVING

To provide support for paving, the subgrade soils should be prepared as recommended in the following section on grading. Compaction of the subgrade, including trench backfills, to at least 90%, and achieving a firm, hard, and unyielding surface will be important for paving support. The preparation of the paving area subgrade should be performed immediately prior to placement of the base course. Proper drainage of the paved areas should be provided since this will reduce moisture infiltration into the subgrade and increase the life of the paving.

To provide data for design paving sections, a California Bearing Ratio (CBR) test was previously performed on a sample of the upper soils. The test results indicated a CBR value of 23 at 90% compaction.

Asphalt Concrete Paving

The required paving and base thicknesses will depend on the expected wheel loads and volume of traffic (Traffic Index or TI). Assuming that the paving subgrade will consist of the on-site or comparable soils compacted to at least 90% as recommended, the minimum recommended paving thicknesses are presented in the following table.

Assumed Traffic Index	Asphalt Concrete (Inches)	Base Course (Inches)
4 (Automobile Parking)	3	4
5 (Driveways with Light Truck Traffic)	3	4
6 (Driveways with Heavy Truck Traffic and Fire Trucks)	4	5

The asphalt paving sections were determined using the Caltrans design method. We can determine the recommended paving and base course thicknesses for other Traffic Indices if required. Careful inspection is recommended to verify that the recommended thicknesses or greater are achieved, and that proper construction procedures are followed.

Portland Cement Concrete Paving

Portland cement concrete paving sections were determined in accordance with procedures developed by the Portland Cement Association. Concrete paving sections for a range of Traffic Indices are presented in the following table. We have assumed that the portland cement concrete will have a compressive strength of at least 3,000 pounds per square inch.

Assumed Traffic Index	Concrete Paving (Inches)	Base Course (Inches)
4 (Automobile Parking)	6½	4
5 (Driveways with Light Truck Traffic)	7	4
6 (Driveways with Heavy Truck Traffic and Fire Trucks)	7½	4

The paving should be provided with expansion joints at regular intervals no more than 15 feet in each direction. Load transfer devices, such as dowels or keys, are recommended at joints in the paving to reduce possible offsets. The paving sections in the above table have been developed based on the strength of unreinforced concrete. Steel reinforcing may be added to the paving to reduce cracking and to prolong the life of the paving.

Base Course

The base course for both asphaltic and concrete paving should meet the specifications for Class 2 Aggregate Base as defined in Section 26 of the latest edition of the State of California, Department of Transportation, Standard Specifications. Alternatively, the base course could meet the specifications for untreated base as defined in Section 200-2 of the latest edition of the Standard Specifications for Public Works Construction. The base course should be compacted to at least 95%.

6.7 GRADING

As previously stated, the upper natural soils are loose and medium stiff at present moisture content but may become somewhat weaker and more compressible, when wet. Therefore, we recommend that the floor slab, paving, and exterior concrete walks and slabs on grade be underlain by at least 2 feet of properly compacted fill soils.

With the possible introduction of additional moisture into the subsurface, which can occur due to water impoundment from improper drainage, rainfall, pipe leaks, or irrigation, settlement could occur. To mitigate the potential for unacceptable settlement, we recommend that provisions for positive surface drainage away from the building be incorporated into the site grading plans. Impoundment of stormwater run-off within the construction area should not be permitted within the immediate vicinity of the building area. We also recommend avoiding the placement of planters, underground water pipes, or any other potential source of additional water to the subsurface soils in the immediate vicinity of the building.

If possible, we recommend that planter and landscaped areas be placed at least 15 feet away from the proposed bed tower expansion. Hardscape and paving with proper surface drainage should be provided within the 15-foot strip. If planer or lawn areas adjacent to the building are desired, these areas should have impermeable bottoms. In addition, we recommend pressure testing of utility lines prior to backfilling to detect and eliminate leaks due to poor workmanship or material defects. Utility lines should again be pressure tested after major seismic events so that any necessary repairs could be performed. Utility lines should also be provided with proper corrosion protection. To substantially reduce the risk of leaking utility lines, all fluid-conveying utilities, except for sewer lines, could be installed above ground.

All concrete, steel, and other construction materials and debris resulting from the demolition of the existing medical office building should be removed prior to construction. The new pile foundations should be located so as to not directly conflict with the locations of the piles currently supporting the existing medical office building. The existing piles should be cut off to a depth of at least 2 feet below the bottom of the overlying new floor slab or new pile cap and be overlain by at least 2 feet of properly compacted fill soil.

Site Preparation

After the site is cleared and any existing fill soils are excavated as recommended, the exposed natural soils should be carefully observed for the removal of all unsuitable deposits. Next, the exposed soils should be scarified to a depth of 6 inches, brought to near-optimum moisture content, and rolled with heavy compaction equipment. At least the

upper 6 inches of the exposed soils should be compacted to at least 90% of the maximum dry density obtainable by the ASTM Designation D1557 method of compaction.

Excavations and Temporary Slopes

Where excavations are deeper than about 4 feet, the sides of the excavations should be sloped back at 1:1 (horizontal to vertical) or shored for safety. Unshored excavations should not extend below a plane drawn at 1½:1 (horizontal to vertical) extending downward from adjacent existing foundations. We would be pleased to present data for design of temporary shoring, if required.

Excavations should be observed by personnel of our firm so that any necessary modifications based on variations in the soil conditions can be made. All applicable safety requirements and regulations, including OSHA regulations, should be met.

Compaction

Any required fill should be placed in loose lifts not more than 8-inches-thick and compacted. The fill should be compacted to at least 90% of the maximum density obtainable by the ASTM Designation D1557 method of compaction. The moisture content of the on-site soils at the time of compaction should vary no more than 2% below or above optimum moisture content.

Backfill

All required backfill should be mechanically compacted in layers; flooding should not be permitted. Proper compaction of backfill will be necessary to reduce settlement of the backfill and to reduce settlement of overlying slabs and paving. Backfill should be compacted to at least 90% of the maximum dry density obtainable by the ASTM Designation D1557 method of compaction. The on-site soils may be used in the compacted backfill. The exterior grades should be sloped to drain away from the foundations to prevent ponding of water.

Some settlement of the backfill should be expected, and any utilities supported therein should be designed to accept differential settlement, particularly at the points of entry to

the building. Also, provisions should be made for some settlement of concrete walks supported on backfill.

Material for Fill

The on-site soils, less any debris or organic matter, may be used in required fills. Cobbles larger than 4 inches in diameter should not be used in the fill. Any required import material should consist of relatively non-expansive soils with an expansion index of less than 35. The imported materials should contain sufficient fines (at least 15% passing the No. 200 sieve) so as to be relatively impermeable and result in a stable subgrade when compacted. All proposed import materials should be approved by our personnel prior to being placed at the site.

6.8 GEOTECHNICAL OBSERVATION

The reworking of the upper soils and the compaction of all required fill should be observed and tested by a representative of our firm. The observation and testing should include:

- Observe the clearing and grubbing operations to assure that all unsuitable materials have been properly removed.
- Observe the exposed subgrade in areas to receive fill and in areas where excavation has resulted in the desired finished subgrade, observe proofrolling, and delineate areas requiring overexcavation.
- Perform visual observation to evaluate the suitability of on-site and import soils for fill placement; collect and submit soil samples for required or recommended laboratory testing where necessary.
- Perform field density and compaction testing to determine the percentage of compaction achieved during fill placement.
- Observe and probe foundation materials to confirm that suitable bearing materials are present at the design foundation depths.
- Observe the installation of drilled cast-in-place concrete piles or auger-cast piles.
- Observe the load testing of auger-cast piles, if used.

The governmental agencies having jurisdiction over the project should be notified prior to commencement of grading so that the necessary grading permits may be obtained and arrangements may be made for the required inspection(s).

7.0 BASIS FOR RECOMMENDATIONS

The recommendations provided in this report are based upon our understanding of the described project information and on our interpretation of the data collected during our current and previous subsurface explorations. We have made our recommendations based upon experience with similar subsurface conditions under similar loading conditions. The recommendations apply to the specific project discussed in this report; therefore, any change in the configuration, location, or the site grades should be provided to us so that we can review our conclusions and recommendations and make any necessary modifications.

The recommendations provided in this report are also based upon the assumption that the necessary geotechnical observations and testing during construction will be performed by representatives of our firm. The field observation services are considered a continuation of the geotechnical investigation and essential to verify that the actual soil conditions are as expected. This also provides for the procedure whereby the client can be advised of unexpected or changed conditions that would require modifications of our original recommendations. In addition, the presence of our representative at the site provides the client with an independent professional opinion regarding the geotechnically related construction procedures. If another firm is retained for the geotechnical observation services, our professional responsibility and liability would be limited to the extent that we would not be the geotechnical engineer of record.

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TABLES

Table 1
Major Named Faults Considered to be Active in Southern California

Fault (in increasing distance)	Maximum Magnitude			Slip Rate (mm/yr.)	Distance From Site (miles)	Direction From Site
San Jacinto (SB Section)	6.7	(a)	SS	6.0	7.3	NE
Elsinore (Glen Ivy Section)	6.8	(a)	SS	5.0	14	SW
Cucamonga	6.9	(a)	RO	5.0	14	NNW
Chino-Central Avenue	6.7	(a)	RO	1.0	15	WSW
San Andreas (SB N.Section)	7.5	(a)	SS	22.0	15	NE
Whittier	6.8	(a)	RO	2.5	19	WSW
San Jose	6.4	(a)	RO	0.5	21	NW
Sierra Madre	7.2	(a)	RO	2.0	21	NW
San Andreas (Mojave S.Section)	7.4	(a)	SS	29.0	22	N
San Gabriel	7.2	(a)	SS	1.0	22	NW
Puente Hills Blind Thrust	7.1	(a)	BT	0.7	28	W
San Joaquin Thrust	6.6	(a)	BT	0.5	30	SW
Clamshell-Sawpit	6.5	(a)	RO	0.5	36	NW
Raymond	6.5	(a)	RO	1.5	38	WNW
Newport-Inglewood Zone	7.1	(a)	SS	1.0	39	SW
Upper Elysian Park Thrust	6.4	(a)	BT	1.3	40	WNW
Verdugo	6.9	(a)	RO	0.5	46	WNW
Palos Verdes	7.3	(a)	SS	3.0	51	WSW
Hollywood	6.4	(a)	RO	1.0	52	WNW
Sierra Madre (San Fernando)	6.7	(a)	RO	2.0	56	WNW
Santa Monica	6.6	(a)	RO	1.0	59	WNW
Northridge Thrust	7.0	(a)	BT	1.5	62	WNW
Malibu Coast	6.7	(a)	RO	0.3	66	W
Santa Susana	6.7	(a)	RO	5.0	68	WNW

(a) California Geological Survey, 2003, 2008
SS Strike Slip
NO Normal Oblique
RO Reverse Oblique
BT Blind Thrust

Prepared by: PER 1/25/13
Checked by: RM 1/25/13

Table 2
Major Named Faults Considered to be Potentially Active in Southern California

Fault (in increasing distance)	Maximum Magnitude			Slip Rate (mm/yr.)	Distance From Site (miles)	Direction From Site
Rialto-Colton	n/a		n/a	n/a	6.8	NE
Indian Hill	6.6	(b)	RO	0.1	20	NW
Peralta Hills	6.5	(b)	RO	0.1	24	WSW
El Modeno	6.5	(b)	NO	0.1	26	WSW
Duarte	6.7	(c)	RO	0.1	30.5	WNW
Norwalk	6.7	(c)	RO	0.1	32.7	W
Pelican Hill	6.3	(b)	SS	0.1	36.5	WSW
Los Alamitos	6.2	(b)	SS	0.1	41.1	WSW

(b) Mark, 1977
(c) Slemmons, 1979
(d) Wesnousky, 1986
(e) Hummon et al., 1994
SS Strike Slip
NO Normal Oblique
RO Reverse Oblique
BT Blind Thrust

Prepared by: PER 1/25/13
Checked by: RM 1/25/13

Table 3
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
02-11-1932	23:11:20	34.42 N	116.85 W	B	69	.0	4.0
11-01-1932	04:45:00	34.00 N	117.25 W	E	13	.0	4.0
01-25-1933	14:44:00	33.92 N	116.75 W	E	59	.0	4.0
03-11-1933	01:54:07	33.62 N	117.97 W	A	67	.0	6.4
03-11-1933	02:04:00	33.75 N	118.08 W	C	69	.0	4.9
03-11-1933	02:05:00	33.75 N	118.08 W	C	69	.0	4.3
03-11-1933	02:09:00	33.75 N	118.08 W	C	69	.0	5.0
03-11-1933	02:10:00	33.75 N	118.08 W	C	69	.0	4.6
03-11-1933	02:11:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	02:16:00	33.75 N	118.08 W	C	69	.0	4.8
03-11-1933	02:17:00	33.60 N	118.00 W	E	71	.0	4.5
03-11-1933	02:22:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	02:27:00	33.75 N	118.08 W	C	69	.0	4.6
03-11-1933	02:30:00	33.75 N	118.08 W	C	69	.0	5.1
03-11-1933	02:31:00	33.60 N	118.00 W	E	71	.0	4.4
03-11-1933	02:52:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	02:57:00	33.75 N	118.08 W	C	69	.0	4.2
03-11-1933	02:58:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	02:59:00	33.75 N	118.08 W	C	69	.0	4.6
03-11-1933	03:05:00	33.75 N	118.08 W	C	69	.0	4.2
03-11-1933	03:09:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	03:11:00	33.75 N	118.08 W	C	69	.0	4.2
03-11-1933	03:23:00	33.75 N	118.08 W	C	69	.0	5.0
03-11-1933	03:36:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	03:39:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	03:47:00	33.75 N	118.08 W	C	69	.0	4.1
03-11-1933	04:36:00	33.75 N	118.08 W	C	69	.0	4.6
03-11-1933	04:39:00	33.75 N	118.08 W	C	69	.0	4.9
03-11-1933	04:40:00	33.75 N	118.08 W	C	69	.0	4.7
03-11-1933	05:10:22	33.70 N	118.07 W	C	70	.0	5.1
03-11-1933	05:13:00	33.75 N	118.08 W	C	69	.0	4.7
03-11-1933	05:15:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	05:18:04	33.58 N	117.98 W	C	71	.0	5.2
03-11-1933	05:21:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	05:24:00	33.75 N	118.08 W	C	69	.0	4.2

NOTE: Q IS A FACTOR RELATING THE QUALITY OF EPICENTRAL DETERMINATION

A = +- 1 km horizontal distance; +- 2 km depth
B = +- 2 km horizontal distance; +- 5 km depth
C = +- 5 km horizontal distance; no depth restriction
D = >+- 5 km horizontal distance

Event qualities are highly suspect prior to 1990. Many of these event qualities are based on incomplete information according to Caltech.

Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
03-11-1933	05:53:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	05:55:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	06:11:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	06:18:00	33.75 N	118.08 W	C	69	.0	4.2
03-11-1933	06:29:00	33.85 N	118.27 W	C	83	.0	4.4
03-11-1933	06:35:00	33.75 N	118.08 W	C	69	.0	4.2
03-11-1933	06:58:03	33.68 N	118.05 W	C	70	.0	5.5
03-11-1933	07:51:00	33.75 N	118.08 W	C	69	.0	4.2
03-11-1933	07:59:00	33.75 N	118.08 W	C	69	.0	4.1
03-11-1933	08:08:00	33.75 N	118.08 W	C	69	.0	4.5
03-11-1933	08:32:00	33.75 N	118.08 W	C	69	.0	4.2
03-11-1933	08:37:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	08:54:57	33.70 N	118.07 W	C	70	.0	5.1
03-11-1933	09:10:00	33.75 N	118.08 W	C	69	.0	5.1
03-11-1933	09:11:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	09:26:00	33.75 N	118.08 W	C	69	.0	4.1
03-11-1933	10:25:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	10:45:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	11:00:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	11:04:00	33.75 N	118.13 W	C	74	.0	4.6
03-11-1933	11:29:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	11:38:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	11:41:00	33.75 N	118.08 W	C	69	.0	4.2
03-11-1933	11:47:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	12:50:00	33.68 N	118.05 W	C	70	.0	4.4
03-11-1933	13:50:00	33.73 N	118.10 W	C	72	.0	4.4
03-11-1933	13:57:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	14:25:00	33.85 N	118.27 W	C	83	.0	5.0
03-11-1933	14:47:00	33.73 N	118.10 W	C	72	.0	4.4
03-11-1933	14:57:00	33.88 N	118.32 W	C	87	.0	4.9
03-11-1933	15:09:00	33.73 N	118.10 W	C	72	.0	4.4
03-11-1933	15:47:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	16:53:00	33.75 N	118.08 W	C	69	.0	4.8
03-11-1933	19:44:00	33.75 N	118.08 W	C	69	.0	4.0
03-11-1933	19:56:00	33.75 N	118.08 W	C	69	.0	4.2

NOTE: Q IS A FACTOR RELATING THE QUALITY OF EPICENTRAL DETERMINATION

A = +- 1 km horizontal distance; +- 2 km depth
B = +- 2 km horizontal distance; +- 5 km depth
C = +- 5 km horizontal distance; no depth restriction
D = >+- 5 km horizontal distance

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
03-11-1933	22:00:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	22:31:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	22:32:00	33.75 N	118.08 W	C	69	.0	4.1
03-11-1933	22:40:00	33.75 N	118.08 W	C	69	.0	4.4
03-11-1933	23:05:00	33.75 N	118.08 W	C	69	.0	4.2
03-12-1933	00:27:00	33.75 N	118.08 W	C	69	.0	4.4
03-12-1933	00:34:00	33.75 N	118.08 W	C	69	.0	4.0
03-12-1933	04:48:00	33.75 N	118.08 W	C	69	.0	4.0
03-12-1933	05:46:00	33.75 N	118.08 W	C	69	.0	4.4
03-12-1933	06:01:00	33.75 N	118.08 W	C	69	.0	4.2
03-12-1933	06:16:00	33.75 N	118.08 W	C	69	.0	4.6
03-12-1933	07:40:00	33.75 N	118.08 W	C	69	.0	4.2
03-12-1933	08:35:00	33.75 N	118.08 W	C	69	.0	4.2
03-12-1933	15:02:00	33.75 N	118.08 W	C	69	.0	4.2
03-12-1933	16:51:00	33.75 N	118.08 W	C	69	.0	4.0
03-12-1933	17:38:00	33.75 N	118.08 W	C	69	.0	4.5
03-12-1933	18:25:00	33.75 N	118.08 W	C	69	.0	4.1
03-12-1933	21:28:00	33.75 N	118.08 W	C	69	.0	4.1
03-12-1933	23:54:00	33.75 N	118.08 W	C	69	.0	4.5
03-13-1933	03:43:00	33.75 N	118.08 W	C	69	.0	4.1
03-13-1933	04:32:00	33.75 N	118.08 W	C	69	.0	4.7
03-13-1933	06:17:00	33.75 N	118.08 W	C	69	.0	4.0
03-13-1933	13:18:28	33.75 N	118.08 W	C	69	.0	5.3
03-13-1933	15:32:00	33.75 N	118.08 W	C	69	.0	4.1
03-13-1933	19:29:00	33.75 N	118.08 W	C	69	.0	4.2
03-14-1933	00:36:00	33.75 N	118.08 W	C	69	.0	4.2
03-14-1933	12:19:00	33.75 N	118.08 W	C	69	.0	4.5
03-14-1933	19:01:50	33.62 N	118.02 W	C	71	.0	5.1
03-14-1933	22:42:00	33.75 N	118.08 W	C	69	.0	4.1
03-15-1933	02:08:00	33.75 N	118.08 W	C	69	.0	4.1
03-15-1933	04:32:00	33.75 N	118.08 W	C	69	.0	4.1
03-15-1933	05:40:00	33.75 N	118.08 W	C	69	.0	4.2
03-15-1933	11:13:32	33.62 N	118.02 W	C	71	.0	4.9
03-16-1933	14:56:00	33.75 N	118.08 W	C	69	.0	4.0
03-16-1933	15:29:00	33.75 N	118.08 W	C	69	.0	4.2

NOTE: Q IS A FACTOR RELATING THE QUALITY OF EPICENTRAL DETERMINATION

A = +- 1 km horizontal distance; +- 2 km depth
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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
03-16-1933	15:30:00	33.75 N	118.08 W	C	69	.0	4.1
03-17-1933	16:51:00	33.75 N	118.08 W	C	69	.0	4.1
03-18-1933	20:52:00	33.75 N	118.08 W	C	69	.0	4.2
03-19-1933	21:23:00	33.75 N	118.08 W	C	69	.0	4.2
03-20-1933	13:58:00	33.75 N	118.08 W	C	69	.0	4.1
03-21-1933	03:26:00	33.75 N	118.08 W	C	69	.0	4.1
03-23-1933	08:40:00	33.75 N	118.08 W	C	69	.0	4.1
03-23-1933	18:31:00	33.75 N	118.08 W	C	69	.0	4.1
03-25-1933	13:46:00	33.75 N	118.08 W	C	69	.0	4.1
03-30-1933	12:25:00	33.75 N	118.08 W	C	69	.0	4.4
03-31-1933	10:49:00	33.75 N	118.08 W	C	69	.0	4.1
04-01-1933	06:42:00	33.75 N	118.08 W	C	69	.0	4.2
04-02-1933	08:00:00	33.75 N	118.08 W	C	69	.0	4.0
04-02-1933	15:36:00	33.75 N	118.08 W	C	69	.0	4.0
05-16-1933	20:58:55	33.75 N	118.17 W	C	77	.0	4.0
08-04-1933	04:17:48	33.75 N	118.18 W	C	78	.0	4.0
10-02-1933	09:10:17	33.78 N	118.13 W	A	73	.0	5.4
10-02-1933	13:26:01	33.62 N	118.02 W	C	71	.0	4.0
10-25-1933	07:00:46	33.95 N	118.13 W	C	69	.0	4.3
11-13-1933	21:28:00	33.87 N	118.20 W	C	77	.0	4.0
11-20-1933	10:32:00	33.78 N	118.13 W	B	73	.0	4.0
01-09-1934	14:10:00	34.10 N	117.68 W	A	31	.0	4.5
01-18-1934	02:14:00	34.10 N	117.68 W	A	31	.0	4.0
01-20-1934	21:17:00	33.62 N	118.12 W	B	79	.0	4.5
01-26-1934	18:44:00	34.08 N	116.47 W	C	85	.0	4.0
02-20-1934	10:35:00	33.47 N	116.63 W	B	89	.0	4.0
04-17-1934	18:33:00	33.57 N	117.98 W	C	72	.0	4.0
11-16-1934	21:26:00	33.75 N	118.00 W	B	62	.0	4.0
06-07-1935	16:33:00	33.27 N	117.02 W	B	86	.0	4.0
06-19-1935	11:17:00	33.72 N	117.52 W	B	31	.0	4.0
07-13-1935	10:54:16	34.20 N	117.90 W	A	54	.0	4.7
09-03-1935	06:47:00	34.03 N	117.32 W	B	9	.0	4.5
10-24-1935	14:48:07	34.10 N	116.80 W	A	56	.0	5.1
10-24-1935	14:51:00	34.10 N	116.88 W	C	48	.0	4.5
10-24-1935	14:52:00	34.10 N	116.88 W	C	48	.0	4.5

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
10-24-1935	15:27:00	34.10 N	116.88 W	C	48	.0	4.0
11-04-1935	03:55:00	33.50 N	116.92 W	B	68	.0	4.5
12-25-1935	17:15:00	33.60 N	118.02 W	B	72	.0	4.5
02-23-1936	22:20:42	34.13 N	117.34 W	A	17	10.0	4.5
02-26-1936	09:33:27	34.14 N	117.34 W	A	19	10.0	4.0
07-29-1936	14:22:52	33.45 N	116.90 W	C	73	10.0	4.0
08-22-1936	05:21:00	33.77 N	117.82 W	B	46	.0	4.0
01-15-1937	18:35:47	33.56 N	118.06 W	B	78	10.0	4.0
03-19-1937	01:23:38	34.11 N	117.43 W	A	15	10.0	4.0
03-26-1937	21:24:00	33.47 N	116.58 W	C	93	.0	4.0
03-27-1937	05:28:00	33.47 N	116.58 W	C	93	.0	4.0
03-27-1937	07:42:00	33.47 N	116.58 W	C	93	.0	4.5
06-01-1937	15:41:44	34.58 N	116.60 W	B	98	10.0	4.0
07-07-1937	11:12:00	33.57 N	117.98 W	B	72	.0	4.0
09-01-1937	13:48:08	34.21 N	117.53 W	A	29	10.0	4.5
09-01-1937	16:35:33	34.18 N	117.55 W	A	27	10.0	4.5
01-04-1938	00:29:00	33.47 N	116.58 W	C	93	.0	4.5
02-08-1938	07:39:00	34.05 N	116.43 W	B	88	.0	4.0
05-21-1938	09:44:00	33.62 N	118.03 W	B	72	.0	4.0
05-31-1938	08:34:55	33.70 N	117.51 W	B	33	10.0	5.2
06-10-1938	14:40:00	34.13 N	116.95 W	B	44	.0	4.0
06-16-1938	05:59:16	33.46 N	116.90 W	B	73	10.0	4.0
07-05-1938	18:06:55	33.68 N	117.55 W	A	36	10.0	4.5
08-06-1938	02:28:00	33.93 N	116.75 W	B	59	.0	4.0
08-06-1938	22:00:55	33.72 N	117.51 W	B	31	10.0	4.0
08-31-1938	03:18:14	33.76 N	118.25 W	A	84	10.0	4.5
11-29-1938	19:21:15	33.90 N	118.43 W	A	97	10.0	4.0
12-07-1938	03:38:00	34.00 N	118.42 W	B	96	.0	4.0
12-27-1938	10:09:28	34.13 N	117.52 W	B	21	10.0	4.0
04-03-1939	02:50:44	34.04 N	117.23 W	A	16	10.0	4.0
11-04-1939	21:41:00	33.77 N	118.12 W	B	72	.0	4.0
11-07-1939	18:52:08	34.00 N	117.28 W	A	10	.0	4.7
12-27-1939	19:28:49	33.78 N	118.20 W	A	79	.0	4.7
01-13-1940	07:49:07	33.78 N	118.13 W	B	73	.0	4.0
02-08-1940	16:56:17	33.70 N	118.07 W	B	70	.0	4.0

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
02-11-1940	19:24:10	33.98 N	118.30 W	B	85	.0	4.0
02-19-1940	12:06:55	34.02 N	117.05 W	A	31	.0	4.6
04-18-1940	18:43:43	34.03 N	117.35 W	A	7	.0	4.4
05-18-1940	05:51:20	34.07 N	116.33 W	A	97	.0	5.2
05-18-1940	06:04:30	34.07 N	116.32 W	A	99	.0	4.6
05-18-1940	07:21:32	34.07 N	116.33 W	A	97	.0	5.0
06-01-1940	05:27:01	34.08 N	116.33 W	A	98	.0	4.7
06-01-1940	06:54:28	34.10 N	116.33 W	A	98	.0	4.3
06-02-1940	06:13:10	34.08 N	116.33 W	A	98	.0	4.5
06-05-1940	08:27:27	33.83 N	117.40 W	B	16	.0	4.0
06-06-1940	22:21:15	34.00 N	116.32 W	A	99	.0	4.3
06-06-1940	23:56:37	34.02 N	116.37 W	A	94	.0	4.4
06-11-1940	19:51:18	34.03 N	116.32 W	A	99	.0	4.4
07-20-1940	04:01:13	33.70 N	118.07 W	B	70	.0	4.0
10-12-1940	00:24:00	33.78 N	118.42 W	B	98	.0	4.0
10-14-1940	20:51:11	33.78 N	118.42 W	B	98	.0	4.0
11-01-1940	07:25:03	33.78 N	118.42 W	B	98	.0	4.0
11-01-1940	20:00:46	33.63 N	118.20 W	B	85	.0	4.0
11-02-1940	02:58:26	33.78 N	118.42 W	B	98	.0	4.0
01-30-1941	01:34:46	33.97 N	118.05 W	A	62	.0	4.1
02-23-1941	18:36:14	33.50 N	116.48 W	C	99	.0	4.5
03-22-1941	08:22:40	33.52 N	118.10 W	B	84	.0	4.0
03-25-1941	23:43:41	34.22 N	117.47 W	B	28	.0	4.0
04-11-1941	01:20:24	33.95 N	117.58 W	B	19	.0	4.0
10-22-1941	06:57:18	33.82 N	118.22 W	A	79	.0	4.8
11-14-1941	08:41:36	33.78 N	118.25 W	A	83	.0	4.8
01-25-1942	21:51:33	34.40 N	116.92 W	B	64	.0	4.0
02-01-1942	15:15:55	34.40 N	116.92 W	B	64	.0	4.0
02-01-1942	15:18:28	34.40 N	116.92 W	B	64	.0	4.5
02-01-1942	16:03:34	34.40 N	116.92 W	B	64	.0	4.5
02-27-1942	01:08:53	34.33 N	117.00 W	B	53	.0	4.0
03-01-1942	10:46:31	34.08 N	116.47 W	C	85	.0	4.0
04-16-1942	07:28:33	33.37 N	118.15 W	C	98	.0	4.0
04-26-1942	15:10:23	33.95 N	116.73 W	C	60	.0	4.0
05-22-1942	15:18:29	34.45 N	116.78 W	C	76	.0	4.0

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
08-07-1942	01:15:33	34.30 N	116.42 W	C	96	.0	4.5
08-07-1942	01:23:58	34.30 N	116.42 W	C	96	.0	4.0
08-07-1942	01:53:14	34.30 N	116.42 W	C	96	.0	4.0
08-22-1942	12:59:13	34.12 N	116.75 W	C	60	.0	4.0
09-21-1942	07:07:54	33.53 N	116.63 W	C	85	.0	4.0
08-29-1943	03:45:13	34.27 N	116.97 W	C	50	.0	5.3
08-29-1943	03:57:54	34.27 N	116.97 W	C	50	.0	4.0
08-29-1943	05:16:30	34.27 N	116.97 W	C	50	.0	4.0
10-14-1943	14:28:44	34.33 N	116.88 W	C	61	.0	4.5
10-15-1943	16:50:01	34.35 N	116.87 W	C	63	.0	4.5
10-24-1943	00:29:21	33.93 N	117.37 W	C	5	.0	4.0
11-17-1943	11:28:41	33.92 N	116.70 W	C	63	.0	4.5
05-05-1944	13:47:15	34.00 N	116.38 W	C	92	.0	4.0
06-10-1944	11:11:50	34.01 N	116.77 W	A	57	10.0	4.5
06-10-1944	11:15:31	33.97 N	116.77 W	B	57	10.0	4.0
06-12-1944	10:45:34	33.98 N	116.72 W	A	61	10.0	5.0
06-12-1944	11:16:35	33.99 N	116.71 W	A	62	10.0	5.2
06-12-1944	22:21:19	33.98 N	116.70 W	A	63	10.0	4.2
06-19-1944	00:03:33	33.87 N	118.22 W	B	78	.0	4.5
06-19-1944	03:06:07	33.87 N	118.22 W	C	78	.0	4.4
08-25-1944	07:30:25	34.00 N	116.70 W	C	63	.0	4.2
10-28-1944	18:30:16	33.93 N	116.75 W	B	59	.0	4.4
04-18-1945	04:58:02	34.43 N	116.98 W	B	63	.0	4.3
09-07-1945	15:34:24	33.97 N	116.80 W	B	54	.0	4.3
02-24-1946	06:07:52	34.40 N	117.80 W	C	61	.0	4.1
09-28-1946	07:19:09	33.95 N	116.85 W	B	49	.0	4.8
07-24-1947	22:10:46	34.02 N	116.50 W	A	82	.0	5.3
07-24-1947	22:53:41	34.02 N	116.50 W	C	82	.0	4.3
07-24-1947	22:54:26	34.02 N	116.50 W	C	82	.0	4.7
07-25-1947	00:46:31	34.02 N	116.50 W	C	82	.0	4.8
07-25-1947	01:56:47	34.02 N	116.50 W	C	82	.0	4.6
07-25-1947	05:17:52	34.02 N	116.50 W	C	82	.0	4.3
07-25-1947	06:19:49	34.02 N	116.50 W	C	82	.0	5.2
07-25-1947	07:57:30	34.02 N	116.50 W	C	82	.0	4.2
07-25-1947	16:14:53	34.02 N	116.50 W	C	82	.0	4.5

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
07-26-1947	01:24:15	34.02 N	116.50 W	C	82	.0	4.2
07-26-1947	02:49:41	34.02 N	116.50 W	C	82	.0	4.9
07-26-1947	23:04:25	34.02 N	116.50 W	C	82	.0	4.5
07-26-1947	23:13:51	34.02 N	116.50 W	C	82	.0	4.1
07-29-1947	16:36:15	34.02 N	116.50 W	C	82	.0	4.2
07-30-1947	05:22:17	34.02 N	116.50 W	C	82	.0	4.2
08-01-1947	17:01:37	34.02 N	116.50 W	C	82	.0	4.1
08-08-1947	06:47:45	34.02 N	116.50 W	C	82	.0	4.0
03-01-1948	08:12:13	34.17 N	117.53 W	B	25	.0	4.7
10-03-1948	02:46:28	34.18 N	117.58 W	A	29	.0	4.0
12-04-1948	23:43:17	33.93 N	116.38 W	A	92	.0	6.0
12-05-1948	00:07:21	33.93 N	116.37 W	A	94	.0	4.9
12-05-1948	00:40:32	33.93 N	116.35 W	A	96	.0	4.4
12-05-1948	00:42:35	33.97 N	116.43 W	A	88	.0	4.6
12-05-1948	00:50:57	34.00 N	116.47 W	A	85	.0	4.4
12-06-1948	02:46:08	34.00 N	116.47 W	A	85	.0	4.3
12-10-1948	20:42:57	33.93 N	116.40 W	A	91	.0	4.4
12-11-1948	16:12:20	33.97 N	116.45 W	A	86	.0	4.5
12-28-1948	12:53:41	33.48 N	116.70 W	B	84	.0	4.0
09-23-1949	21:44:40	33.96 N	116.65 W	A	68	12.2	4.0
01-11-1950	21:41:35	33.94 N	118.20 W	A	76	.4	4.1
01-13-1950	05:07:19	33.96 N	116.43 W	A	88	5.9	4.1
08-12-1950	02:17:17	34.32 N	116.80 W	B	66	.0	4.3
08-28-1950	19:45:26	34.31 N	116.84 W	A	62	11.7	4.2
09-05-1950	19:19:56	33.65 N	116.75 W	B	69	.0	4.7
12-22-1950	02:05:36	33.42 N	116.57 W	B	98	.0	4.0
02-15-1951	10:47:59	33.48 N	116.50 W	B	98	.0	4.8
02-15-1951	10:49:57	33.48 N	116.50 W	B	98	.0	4.6
09-22-1951	08:22:39	34.12 N	117.34 W	A	16	11.9	4.3
10-16-1951	12:41:05	34.17 N	116.98 W	B	42	.0	4.0
01-08-1952	06:34:27	33.96 N	116.35 W	B	96	11.4	4.4
02-17-1952	12:36:58	34.00 N	117.27 W	A	11	16.0	4.5
08-23-1952	10:09:07	34.52 N	118.20 W	A	96	13.1	5.1
02-04-1953	04:36:16	33.40 N	116.57 W	C	99	.0	4.3
04-30-1954	00:36:23	34.03 N	116.79 W	A	55	11.1	4.2

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
10-26-1954	16:22:26	33.73 N	117.47 W	B	28	.0	4.1
04-25-1955	02:55:15	33.45 N	116.68 W	B	87	.0	4.0
05-15-1955	17:03:25	34.12 N	117.48 W	A	19	7.6	4.0
07-02-1955	16:29:38	34.41 N	116.67 W	A	81	10.0	4.2
01-03-1956	00:25:48	33.72 N	117.50 W	B	30	13.7	4.7
03-16-1956	20:29:33	34.31 N	116.76 W	A	68	1.3	4.8
03-16-1956	20:33:44	34.25 N	116.77 W	A	64	.8	4.0
03-16-1956	20:36:13	34.26 N	116.76 W	A	66	3.3	4.0
03-16-1956	23:34:56	34.34 N	116.74 W	A	71	1.7	4.4
03-18-1956	02:42:17	34.30 N	116.78 W	A	66	6.3	4.0
05-11-1956	16:30:50	34.23 N	116.80 W	B	61	13.3	4.7
09-23-1956	11:24:41	33.53 N	116.56 W	A	90	12.2	4.3
02-01-1957	07:52:15	33.98 N	116.34 W	B	96	11.0	4.6
12-04-1957	02:51:44	34.07 N	116.43 W	B	88	3.7	4.3
04-17-1959	16:19:00	33.88 N	116.44 W	A	88	22.2	4.2
06-12-1959	11:03:12	33.49 N	116.78 W	A	78	5.7	4.0
06-27-1959	16:22:11	33.97 N	116.88 W	A	46	13.8	4.0
08-26-1959	05:32:50	34.07 N	116.57 W	A	75	16.7	4.3
06-28-1960	20:00:48	34.12 N	117.47 W	A	18	12.0	4.1
10-04-1961	02:21:31	33.85 N	117.75 W	B	37	4.3	4.1
10-20-1961	19:49:50	33.65 N	117.99 W	B	67	4.6	4.3
10-20-1961	20:07:14	33.66 N	117.98 W	B	66	6.1	4.0
10-20-1961	21:42:40	33.67 N	117.98 W	B	65	7.2	4.0
10-20-1961	22:35:34	33.67 N	118.01 W	B	67	5.6	4.1
11-20-1961	08:53:34	33.68 N	117.99 W	B	65	4.4	4.0
04-27-1962	09:12:32	33.74 N	117.19 W	B	32	5.7	4.1
10-29-1962	02:42:53	34.33 N	116.86 W	B	61	8.6	5.0
11-30-1962	23:51:05	34.34 N	116.91 W	B	59	7.0	4.3
12-01-1962	00:35:48	34.32 N	116.88 W	B	60	9.6	4.3
12-02-1962	00:41:38	34.33 N	116.88 W	B	61	6.7	4.4
09-23-1963	14:41:52	33.71 N	116.93 W	B	52	16.5	5.1
01-06-1964	23:47:12	34.38 N	116.47 W	B	95	12.3	4.5
11-17-1964	14:52:28	33.90 N	116.57 W	B	76	10.3	4.0
01-01-1965	08:04:18	34.14 N	117.52 W	B	22	5.9	4.4
04-15-1965	20:08:33	34.13 N	117.43 W	B	18	5.5	4.5

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
10-17-1965	09:45:18	33.98 N	116.77 W	B	56	17.0	4.9
05-21-1967	14:42:34	33.51 N	116.58 W	B	90	19.4	4.7
06-15-1967	04:58:05	34.00 N	117.97 W	B	55	10.0	4.1
08-11-1967	00:57:11	33.51 N	116.63 W	B	87	10.7	4.1
04-18-1968	17:42:13	34.32 N	116.93 W	B	57	4.7	4.0
02-28-1969	04:56:12	34.57 N	118.11 W	A	94	5.3	4.3
05-05-1969	16:02:09	34.30 N	117.57 W	B	40	8.8	4.4
10-27-1969	13:16:02	33.55 N	117.81 W	B	62	6.5	4.5
09-12-1970	14:10:11	34.27 N	117.52 W	A	35	8.0	4.1
09-12-1970	14:30:52	34.27 N	117.54 W	A	36	8.0	5.2
09-13-1970	04:47:48	34.28 N	117.55 W	A	37	8.0	4.4
02-09-1971	14:10:21	34.36 N	118.31 W	B	95	5.0	4.7
02-09-1971	14:16:12	34.34 N	118.33 W	C	96	11.1	4.1
02-09-1971	15:58:20	34.33 N	118.33 W	B	96	14.2	4.8
02-10-1971	03:12:12	34.37 N	118.30 W	B	95	.8	4.0
02-10-1971	05:06:36	34.41 N	118.33 W	A	100	4.7	4.3
04-25-1971	14:48:06	34.37 N	118.31 W	B	96	-2.0	4.0
06-22-1971	10:41:19	33.75 N	117.48 W	B	27	8.0	4.2
01-31-1972	01:55:04	34.31 N	116.88 W	B	60	8.0	4.0
07-14-1973	08:00:20	34.44 N	116.83 W	A	72	8.0	4.6
02-10-1975	12:51:17	34.40 N	116.64 W	A	83	8.0	4.4
08-02-1975	00:14:07	33.52 N	116.56 W	A	92	13.4	4.7
08-14-1975	08:08:49	34.02 N	116.43 W	B	89	10.9	4.0
01-01-1976	17:20:12	33.97 N	117.89 W	A	47	6.2	4.2
08-11-1976	15:24:55	33.48 N	116.51 W	P	97	15.4	4.3
04-01-1978	10:52:27	34.20 N	116.96 W	A	46	8.0	4.0
06-05-1978	16:03:03	33.42 N	116.70 W	A	88	11.9	4.4
11-20-1978	06:55:09	34.15 N	116.97 W	A	43	6.1	4.3
03-15-1979	20:17:49	34.31 N	116.44 W	A	95	2.0	4.9
03-15-1979	21:07:16	34.33 N	116.44 W	A	95	2.5	5.3
03-15-1979	21:34:25	34.35 N	116.45 W	A	95	1.5	4.5
03-15-1979	23:07:58	34.33 N	116.44 W	A	95	2.8	4.8
03-16-1979	17:36:59	34.33 N	116.40 W	C	99	5.0	4.0
03-18-1979	22:53:02	34.23 N	116.36 W	A	98	3.4	4.2
03-31-1979	00:16:08	34.30 N	116.50 W	B	89	.1	4.2

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
06-29-1979	05:53:20	34.25 N	116.90 W	B	54	5.7	4.6
06-30-1979	00:34:11	34.24 N	116.90 W	B	54	5.8	4.7
06-30-1979	07:03:52	34.25 N	116.90 W	B	54	5.6	4.5
07-13-1979	02:26:03	34.26 N	116.44 W	C	93	5.0	4.0
08-22-1979	02:01:36	33.70 N	116.84 W	B	59	5.0	4.1
10-19-1979	12:22:37	34.21 N	117.53 W	B	29	4.9	4.1
02-25-1980	10:47:38	33.50 N	116.51 W	A	96	13.6	5.5
02-09-1982	23:41:17	33.85 N	116.96 W	D	41	6.0	4.1
05-25-1982	13:44:30	33.55 N	118.21 W	A	90	12.6	4.3
06-15-1982	23:49:21	33.55 N	116.68 W	A	81	13.1	4.8
06-16-1982	00:03:01	33.57 N	116.66 W	C	80	9.0	4.2
11-10-1982	11:21:25	34.06 N	116.67 W	A	67	11.4	4.1
01-08-1983	07:19:30	34.13 N	117.45 W	A	18	7.8	4.1
02-27-1984	10:18:15	33.47 N	118.06 W	C	84	6.0	4.0
06-11-1984	22:21:10	34.38 N	116.61 W	A	84	1.8	4.0
08-06-1984	08:14:36	33.98 N	116.71 W	A	62	14.2	4.3
02-15-1985	23:26:26	33.98 N	116.40 W	A	91	2.3	4.0
07-18-1985	14:05:25	34.42 N	116.54 W	C	92	6.0	4.2
08-29-1985	07:59:08	34.32 N	116.82 W	A	65	6.1	4.1
10-02-1985	23:44:12	34.02 N	117.25 W	A	14	15.2	4.8
07-08-1986	09:20:44	34.00 N	116.61 W	A	72	10.4	5.6
07-08-1986	09:24:12	34.03 N	116.65 W	C	68	9.1	4.4
07-08-1986	09:28:13	33.95 N	116.53 W	C	79	17.8	4.0
07-08-1986	10:09:02	33.98 N	116.58 W	A	74	8.1	4.4
07-08-1986	10:11:00	34.02 N	116.67 W	A	66	3.9	4.1
07-08-1986	10:22:39	34.03 N	116.63 W	A	70	10.9	4.4
07-08-1986	19:36:20	34.02 N	116.61 W	A	71	11.7	4.0
07-09-1986	00:12:32	33.98 N	116.57 W	A	75	8.7	4.2
07-12-1986	05:45:27	33.99 N	116.65 W	A	68	6.6	4.0
07-17-1986	20:35:14	33.99 N	116.65 W	A	68	6.7	4.6
07-17-1986	21:54:45	33.99 N	116.65 W	A	68	7.3	4.4
08-29-1986	07:46:54	33.95 N	116.60 W	A	73	5.3	4.0
10-15-1986	02:28:47	33.95 N	116.58 W	A	75	6.6	4.1
02-21-1987	23:15:29	34.13 N	117.45 W	A	18	8.5	4.0
05-11-1987	15:10:10	34.31 N	116.92 W	A	57	5.3	4.1

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Table 3 - continued
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(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
10-01-1987	14:42:20	34.06 N	118.08 W	A	65	9.5	5.9
10-01-1987	14:45:41	34.05 N	118.10 W	A	67	13.6	4.7
10-01-1987	14:48:03	34.08 N	118.09 W	A	66	11.7	4.1
10-01-1987	14:49:05	34.06 N	118.10 W	A	67	11.7	4.7
10-01-1987	15:12:31	34.05 N	118.09 W	A	66	10.8	4.7
10-01-1987	15:59:53	34.05 N	118.09 W	A	66	10.4	4.0
10-04-1987	10:59:38	34.07 N	118.10 W	A	67	8.3	5.3
02-11-1988	15:25:55	34.08 N	118.05 W	A	62	12.5	4.7
06-26-1988	15:04:58	34.14 N	117.71 W	A	35	7.9	4.7
11-20-1988	05:39:28	33.51 N	118.07 W	C	82	6.0	4.9
12-03-1988	11:38:26	34.15 N	118.13 W	A	72	14.3	5.0
12-16-1988	05:53:05	33.98 N	116.68 W	A	65	8.1	4.9
02-18-1989	07:17:04	34.01 N	117.74 W	A	33	3.3	4.1
04-07-1989	20:07:30	33.62 N	117.90 W	A	62	12.9	4.7
06-04-1989	21:33:59	34.60 N	116.84 W	A	85	1.9	4.3
06-12-1989	16:57:18	34.03 N	118.18 W	A	74	15.6	4.6
06-12-1989	17:22:25	34.02 N	118.18 W	A	74	15.5	4.4
12-02-1989	23:16:47	33.65 N	116.74 W	A	70	14.5	4.2
12-28-1989	09:41:08	34.19 N	117.39 W	A	24	14.6	4.3
02-28-1990	23:43:36	34.14 N	117.70 W	A	34	4.5	5.4
03-01-1990	00:34:57	34.13 N	117.70 W	A	34	4.4	4.0
03-01-1990	03:23:03	34.15 N	117.72 W	A	37	11.4	4.7
03-02-1990	17:26:25	34.15 N	117.69 W	A	34	5.6	4.7
04-17-1990	22:32:27	34.11 N	117.72 W	A	34	3.6	4.8
06-28-1991	14:43:54	34.27 N	117.99 W	A	65	9.1	5.8
06-28-1991	17:00:55	34.25 N	117.99 W	A	64	9.5	4.3
12-04-1991	08:17:03	34.18 N	117.02 W	A	40	10.7	4.0
04-23-1992	02:25:29	33.96 N	116.32 W	A	98	11.5	4.6
04-23-1992	04:50:23	33.96 N	116.32 W	A	98	12.4	6.1
04-23-1992	05:10:10	34.01 N	116.32 W	A	98	3.0	4.3
04-23-1992	05:10:28	33.96 N	116.33 W	A	97	3.2	4.4
04-23-1992	11:32:33	33.97 N	116.32 W	B	98	.8	4.0
05-04-1992	01:16:02	33.94 N	116.34 W	A	96	5.8	4.1
05-04-1992	16:19:49	33.94 N	116.30 W	A	100	12.4	4.8
05-06-1992	02:38:43	33.94 N	116.31 W	A	99	6.8	4.7

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(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
05-18-1992	15:44:17	33.95 N	116.34 W	A	97	6.6	5.0
06-11-1992	00:24:19	34.17 N	116.35 W	A	98	.8	4.4
06-28-1992	11:57:34	34.20 N	116.44 W	A	91	1.0	7.3
06-28-1992	12:00:45	34.13 N	116.41 W	B	92	.0	5.6
06-28-1992	12:01:16	34.12 N	116.32 W	C	99	6.0	5.4
06-28-1992	12:17:49	34.51 N	116.63 W	C	92	5.5	4.6
06-28-1992	12:18:51	34.17 N	116.79 W	A	59	.0	4.3
06-28-1992	12:36:40	34.13 N	116.43 W	C	89	7.4	5.3
06-28-1992	12:40:53	34.33 N	116.55 W	D	87	6.0	5.4
06-28-1992	12:43:58	34.11 N	116.43 W	A	90	3.0	4.4
06-28-1992	12:56:09	34.48 N	116.52 W	D	97	6.0	4.3
06-28-1992	13:10:50	34.42 N	116.45 W	C	99	6.0	4.7
06-28-1992	13:17:47	34.14 N	116.41 W	C	92	6.0	4.1
06-28-1992	13:18:15	34.09 N	116.39 W	A	93	.0	4.4
06-28-1992	13:26:05	34.16 N	116.41 W	C	92	6.0	4.8
06-28-1992	13:35:38	33.97 N	116.51 W	D	80	6.0	4.0
06-28-1992	13:40:55	34.19 N	116.43 W	C	91	6.0	4.2
06-28-1992	13:50:16	34.07 N	116.39 W	C	92	6.0	4.1
06-28-1992	13:50:46	34.11 N	116.40 W	C	92	6.0	4.9
06-28-1992	14:09:28	34.11 N	116.65 W	C	70	6.0	4.1
06-28-1992	14:39:06	34.09 N	116.43 W	A	89	.2	4.3
06-28-1992	14:43:21	34.16 N	116.85 W	B	53	11.1	5.5
06-28-1992	15:04:51	34.16 N	116.83 W	A	55	12.2	4.4
06-28-1992	15:05:30	34.20 N	116.83 W	C	57	5.2	6.4
06-28-1992	15:17:00	34.13 N	116.86 W	B	51	17.9	4.0
06-28-1992	15:17:13	34.10 N	116.87 W	B	49	2.9	4.6
06-28-1992	15:18:33	34.20 N	116.76 W	B	62	2.2	4.6
06-28-1992	15:24:29	34.21 N	116.76 W	C	63	6.0	4.7
06-28-1992	15:25:20	34.21 N	116.80 W	C	59	6.0	4.2
06-28-1992	15:45:54	34.08 N	116.40 W	A	92	2.6	4.2
06-28-1992	15:53:14	34.22 N	116.73 W	B	66	.8	4.1
06-28-1992	15:56:11	34.22 N	116.75 W	A	64	1.4	4.0
06-28-1992	16:01:15	34.03 N	116.38 W	C	93	1.7	4.3
06-28-1992	16:08:37	34.22 N	116.75 W	A	64	4.9	4.1
06-28-1992	16:09:53	34.06 N	116.37 W	A	94	3.8	4.1

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(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
06-28-1992	16:17:19	34.21 N	116.76 W	C	63	6.0	4.2
06-28-1992	16:32:10	34.60 N	116.62 W	C	98	6.0	4.4
06-28-1992	16:33:08	34.59 N	116.64 W	C	97	6.0	4.1
06-28-1992	17:01:31	34.18 N	116.92 W	A	48	13.7	5.1
06-28-1992	17:05:57	34.26 N	116.91 W	A	53	7.7	5.0
06-28-1992	17:18:29	34.19 N	116.81 W	A	58	9.1	4.1
06-28-1992	17:18:42	34.25 N	116.78 W	C	63	.0	4.0
06-28-1992	17:21:27	34.22 N	116.86 W	A	55	1.4	4.2
06-28-1992	17:31:21	34.29 N	116.45 W	B	93	6.8	4.1
06-28-1992	17:32:30	34.20 N	116.82 W	A	58	2.2	4.0
06-28-1992	17:39:51	34.38 N	116.47 W	C	96	6.0	4.0
06-28-1992	17:42:32	34.24 N	116.90 W	B	53	6.5	4.0
06-28-1992	17:44:30	34.16 N	116.85 W	A	53	5.3	4.1
06-28-1992	17:48:32	34.22 N	116.75 W	A	64	1.2	4.4
06-28-1992	19:26:37	34.18 N	116.80 W	A	58	1.0	4.2
06-28-1992	20:51:31	34.21 N	116.78 W	A	61	11.1	4.1
06-28-1992	21:13:16	34.10 N	116.43 W	A	89	3.8	4.6
06-28-1992	22:13:12	34.06 N	116.36 W	B	95	7.0	4.0
06-28-1992	22:48:22	34.15 N	116.47 W	A	87	11.0	4.1
06-29-1992	03:01:56	34.24 N	116.44 W	A	92	7.5	4.4
06-29-1992	11:07:06	34.50 N	116.53 W	C	98	6.0	4.2
06-29-1992	11:13:18	34.24 N	116.74 W	A	66	3.0	4.1
06-29-1992	11:44:47	34.20 N	116.79 W	A	60	.8	4.3
06-29-1992	11:44:56	34.60 N	116.62 W	C	99	6.0	4.4
06-29-1992	14:08:37	34.10 N	116.40 W	A	92	10.4	5.5
06-29-1992	14:12:06	34.10 N	116.40 W	B	92	7.1	4.0
06-29-1992	14:13:38	34.11 N	116.40 W	A	92	9.9	5.0
06-29-1992	14:31:30	34.08 N	116.39 W	A	93	4.9	4.6
06-29-1992	14:41:26	34.12 N	117.00 W	A	39	4.7	4.6
06-29-1992	14:54:06	34.10 N	116.42 W	A	90	3.7	4.2
06-29-1992	16:25:29	34.09 N	116.42 W	A	90	3.0	4.2
06-29-1992	16:41:41	34.25 N	116.72 W	A	68	1.6	4.5
06-29-1992	19:23:20	34.17 N	116.77 W	A	60	8.0	4.0
06-29-1992	20:44:25	34.66 N	116.70 W	C	98	6.0	4.4
06-30-1992	00:06:08	34.13 N	116.40 W	A	92	3.2	4.4

NOTE: Q IS A FACTOR RELATING THE QUALITY OF EPICENTRAL DETERMINATION

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
06-30-1992	11:30:29	34.09 N	116.42 W	A	90	11.6	4.4
06-30-1992	12:14:49	34.09 N	116.42 W	A	90	11.9	4.2
06-30-1992	12:34:54	34.32 N	116.45 W	A	95	4.6	4.2
06-30-1992	14:38:11	34.00 N	116.36 W	A	95	.9	4.9
06-30-1992	15:19:05	34.17 N	116.41 W	A	93	.4	4.1
06-30-1992	15:20:08	34.26 N	116.74 W	C	67	6.0	4.2
06-30-1992	17:14:21	34.06 N	116.37 W	A	94	.0	4.1
06-30-1992	17:26:30	34.64 N	116.66 W	C	100	6.0	4.4
06-30-1992	20:00:25	34.64 N	116.65 W	C	100	6.0	4.3
06-30-1992	20:05:06	33.99 N	116.36 W	A	94	.6	4.1
06-30-1992	21:22:37	34.00 N	116.35 W	A	95	1.4	4.7
06-30-1992	21:22:54	34.13 N	116.73 W	A	62	11.9	4.8
06-30-1992	21:49:00	34.08 N	116.99 W	A	38	3.6	4.4
07-01-1992	07:01:49	34.10 N	116.38 W	A	93	.0	4.4
07-01-1992	07:40:29	34.33 N	116.46 W	C	93	6.0	5.3
07-01-1992	17:07:15	34.27 N	116.69 W	A	72	4.7	4.2
07-01-1992	17:45:46	34.28 N	116.69 W	B	72	5.9	4.4
07-01-1992	20:46:17	34.28 N	116.73 W	A	69	.7	4.2
07-01-1992	20:53:56	34.28 N	116.73 W	A	69	1.3	4.0
07-02-1992	00:16:22	34.31 N	116.44 W	A	94	6.0	4.0
07-03-1992	04:15:50	34.21 N	116.77 W	A	62	10.6	4.1
07-03-1992	17:17:06	34.26 N	116.90 W	A	55	7.6	4.1
07-05-1992	05:49:38	33.95 N	116.40 W	A	91	3.2	4.1
07-05-1992	20:03:03	34.30 N	116.80 W	A	64	3.1	4.1
07-06-1992	12:00:59	34.09 N	116.37 W	A	94	1.7	4.4
07-06-1992	18:06:36	34.46 N	116.48 W	A	99	.4	4.3
07-06-1992	19:41:37	34.08 N	116.38 W	A	93	3.2	4.4
07-07-1992	08:21:03	34.07 N	116.38 W	A	93	3.2	4.1
07-07-1992	22:09:28	34.34 N	116.47 W	A	94	2.5	4.4
07-09-1992	01:43:57	34.24 N	116.84 W	A	58	.0	4.9
07-09-1992	02:34:35	34.22 N	116.84 W	A	57	.5	4.2
07-09-1992	12:23:17	34.22 N	116.81 W	A	59	1.2	4.2
07-10-1992	01:29:40	34.23 N	116.85 W	A	57	.4	4.2
07-10-1992	02:41:14	34.12 N	116.39 W	A	93	3.4	4.0
07-15-1992	00:18:56	34.33 N	116.46 W	A	94	.0	4.0

NOTE: Q IS A FACTOR RELATING THE QUALITY OF EPICENTRAL DETERMINATION

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
07-18-1992	00:06:11	34.10 N	116.42 W	A	90	2.6	4.0
07-20-1992	04:08:23	34.20 N	116.43 W	C	91	6.0	4.1
07-21-1992	21:10:29	34.22 N	116.77 W	A	63	1.7	4.0
07-21-1992	23:22:10	34.13 N	116.60 W	A	74	1.6	4.1
07-25-1992	04:31:59	33.94 N	116.31 W	A	100	4.7	4.8
07-28-1992	18:27:03	34.11 N	116.42 W	A	91	.0	4.6
07-31-1992	18:03:52	34.10 N	116.42 W	A	90	.0	4.0
08-04-1992	19:06:12	34.10 N	116.38 W	A	93	.0	4.0
08-07-1992	00:43:28	34.27 N	116.77 W	A	65	1.7	4.0
08-08-1992	15:37:43	34.38 N	116.46 W	A	96	2.8	4.5
08-11-1992	06:11:17	34.06 N	116.37 W	A	94	.7	4.2
08-15-1992	08:24:14	34.09 N	116.40 W	A	91	.4	4.8
08-17-1992	20:41:52	34.19 N	116.86 W	A	54	11.3	5.0
08-18-1992	09:46:40	34.20 N	116.86 W	A	54	12.2	4.2
08-24-1992	13:51:46	34.27 N	116.77 W	A	65	1.8	4.3
08-31-1992	09:25:40	34.45 N	116.47 W	A	100	11.0	4.3
09-09-1992	12:50:45	33.95 N	116.33 W	A	97	5.3	4.3
09-15-1992	08:47:11	34.06 N	116.36 W	A	95	8.3	5.1
09-16-1992	19:23:54	34.33 N	116.39 W	B	100	10.9	4.0
10-02-1992	07:19:57	34.60 N	116.64 W	A	98	3.4	4.6
10-05-1992	11:18:40	34.29 N	116.45 W	B	93	10.3	4.6
11-27-1992	16:00:57	34.34 N	116.90 W	A	60	1.4	5.4
11-27-1992	18:32:24	34.36 N	116.90 W	A	62	1.1	4.1
11-29-1992	14:21:20	34.37 N	116.88 W	A	64	3.4	4.0
12-04-1992	02:08:57	34.37 N	116.90 W	A	62	3.0	5.2
12-04-1992	05:25:11	34.38 N	116.92 W	A	62	2.7	4.7
12-04-1992	12:59:42	34.36 N	116.91 W	A	61	.7	4.3
12-07-1992	03:33:31	34.36 N	116.92 W	A	60	1.1	4.0
12-11-1992	01:38:34	34.27 N	116.40 W	A	96	2.7	4.1
12-21-1992	11:44:02	34.09 N	116.41 W	A	90	3.6	4.0
02-15-1993	07:59:33	34.40 N	116.46 W	C	97	6.0	4.2
05-31-1993	08:55:29	34.12 N	117.00 W	A	39	5.7	4.1
07-08-1993	22:57:44	34.25 N	116.43 W	A	93	2.4	4.0
08-21-1993	01:46:38	34.03 N	116.32 W	A	98	9.1	5.0
04-06-1994	19:01:04	34.19 N	117.10 W	A	36	7.3	4.8

NOTE: Q IS A FACTOR RELATING THE QUALITY OF EPICENTRAL DETERMINATION

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D = >+- 5 km horizontal distance

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
06-16-1994	16:24:27	34.27 N	116.40 W	A	96	3.4	5.0
11-20-1994	04:31:43	34.01 N	116.32 W	A	98	6.3	4.2
12-06-1994	03:48:34	34.29 N	118.39 W	A	99	9.0	4.5
09-05-1995	20:27:18	34.20 N	116.44 W	A	91	.0	4.4
11-27-1996	01:42:43	33.95 N	116.31 W	A	99	6.0	4.1
06-28-1997	21:45:25	34.17 N	117.34 W	A	22	10.0	4.2
09-19-1997	22:37:14	34.14 N	116.86 W	A	52	10.3	4.1
09-28-1997	15:57:22	34.30 N	116.45 W	A	93	7.7	4.4
12-05-1997	17:04:38	34.10 N	117.00 W	A	38	4.5	4.1
12-21-1997	00:20:58	33.67 N	117.01 W	A	48	.0	4.0
01-05-1998	18:14:06	33.95 N	117.71 W	A	30	11.5	4.3
03-11-1998	12:18:51	34.02 N	117.23 W	A	15	14.9	4.5
08-16-1998	13:34:40	34.12 N	116.93 W	A	45	6.2	4.7
08-20-1998	23:49:58	34.37 N	117.65 W	A	50	9.0	4.4
10-01-1998	18:18:15	34.11 N	116.92 W	A	45	4.4	4.7
10-27-1998	01:08:40	34.32 N	116.84 W	A	63	5.9	4.9
10-27-1998	15:40:17	34.32 N	116.85 W	A	62	4.3	4.1
05-14-1999	07:54:03	34.06 N	116.37 W	A	94	1.9	4.9
05-14-1999	10:52:35	34.03 N	116.36 W	A	95	1.7	4.2
07-19-1999	22:09:27	33.63 N	116.72 W	A	72	14.0	4.2
09-20-1999	07:02:49	34.32 N	116.85 W	A	63	2.8	4.2
02-21-2000	13:49:43	34.05 N	117.26 W	A	14	15.0	4.5
03-07-2000	00:20:28	33.81 N	117.72 W	A	36	11.3	4.0
12-02-2000	08:28:07	34.27 N	116.77 W	A	65	3.3	4.1
02-10-2001	21:05:05	34.29 N	116.95 W	A	53	9.1	5.1
02-11-2001	00:39:15	34.29 N	116.94 W	A	53	8.1	4.2
09-09-2001	23:59:18	34.06 N	118.39 W	A	93	7.9	4.2
10-28-2001	16:27:45	33.92 N	118.27 W	A	82	21.1	4.0
10-31-2001	07:56:16	33.51 N	116.51 W	A	96	15.2	5.1
12-14-2001	12:01:35	33.95 N	117.75 W	A	34	13.8	4.0
09-03-2002	07:08:51	33.92 N	117.78 W	A	37	12.9	4.8
02-22-2003	12:19:10	34.31 N	116.85 W	A	62	1.2	5.4
02-22-2003	12:20:15	34.31 N	116.85 W	A	62	4.4	4.0
02-22-2003	12:21:33	34.31 N	116.85 W	A	62	4.4	4.3
02-22-2003	12:25:13	34.33 N	116.86 W	C	62	9.3	4.0

NOTE: Q IS A FACTOR RELATING THE QUALITY OF EPICENTRAL DETERMINATION

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
02-22-2003	14:16:08	34.32 N	116.86 W	A	62	4.2	4.1
02-22-2003	19:33:45	34.31 N	116.85 W	A	61	3.0	4.5
02-25-2003	04:03:04	34.32 N	116.84 W	A	62	2.7	4.6
02-27-2003	05:00:21	34.30 N	116.84 W	A	62	4.6	4.0
07-15-2003	06:15:50	34.62 N	116.67 W	A	97	7.6	4.2
11-13-2004	17:39:16	34.35 N	116.84 W	A	65	9.6	4.2
01-06-2005	14:35:27	34.13 N	117.44 W	A	17	4.2	4.4
01-12-2005	08:10:46	33.95 N	116.40 W	A	91	7.6	4.3
06-12-2005	15:41:46	33.53 N	116.57 W	A	90	14.2	5.2
06-16-2005	20:53:26	34.06 N	117.01 W	A	35	11.6	4.9
06-27-2005	22:17:33	34.05 N	117.03 W	A	34	12.1	4.0
10-18-2005	04:08:41	34.01 N	116.78 W	A	56	16.7	4.1
10-18-2005	07:31:03	34.01 N	116.78 W	A	56	18.6	4.4
12-03-2005	07:49:34	34.33 N	116.83 W	A	64	5.1	4.1
08-09-2007	07:58:49	34.30 N	118.06 W	A	72	7.6	4.7
09-02-2007	17:29:14	33.73 N	117.48 W	A	29	12.6	4.7
10-16-2007	08:53:44	34.38 N	117.64 W	A	51	8.1	4.2
12-19-2007	12:14:09	34.16 N	116.98 W	A	42	9.3	4.1
03-09-2008	09:22:32	34.14 N	117.46 W	A	20	3.7	4.0
06-23-2008	14:14:57	34.05 N	117.25 W	A	15	14.4	4.0
07-29-2008	18:42:15	33.95 N	117.76 W	A	35	14.7	5.4
10-02-2008	09:41:49	34.08 N	116.97 W	A	40	12.5	4.1
01-09-2009	03:49:46	34.11 N	117.30 W	A	16	14.2	4.5
04-24-2009	03:27:50	33.89 N	117.79 W	A	39	4.2	4.0
05-18-2009	03:39:36	33.94 N	118.34 W	A	88	13.9	4.7
05-19-2009	22:49:11	33.93 N	118.33 W	A	88	12.8	4.0
01-12-2010	02:36:00	33.97 N	116.88 W	A	47	10.1	4.3
01-16-2010	12:03:26	33.93 N	117.02 W	A	34	13.9	4.3
02-13-2010	21:39:00	34.01 N	117.02 W	A	34	8.5	4.1
03-16-2010	11:04:00	33.99 N	118.08 W	A	65	18.9	4.4
08-06-2010	17:39:32	33.98 N	116.44 W	A	87	7.7	4.1
09-14-2011	14:44:51	33.95 N	117.08 W	A	28	16.9	4.1

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Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(CAL TECH DATA 1932-2012)

S E A R C H O F E A R T H Q U A K E D A T A F I L E 1

SITE: Riverside Community Hospital

COORDINATES OF SITE	33.9771 N 117.3827 W
DISTANCE PER DEGREE	110.9 KM-N 92.4 KM-W
MAGNITUDE LIMITS	4.0 - 8.5
TEMPORAL LIMITS	1932 - 2012
SEARCH RADIUS (KM)	100
NUMBER OF YEARS OF DATA	80.00
NUMBER OF EARTHQUAKES IN FILE	4539
NUMBER OF EARTHQUAKES IN AREA	627

AMEC Environment & Infrastructure, Inc.

Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(RICHTER DATA 1906-1931)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
09-20-1907	01:54:00	34.20 N	117.10 W	D	36	.0	6.0
05-15-1910	15:47:00	33.70 N	117.40 W	D	31	.0	6.0
04-21-1918	22:32:25	33.75 N	117.00 W	D	43	.0	6.8
07-23-1923	07:30:26	34.00 N	117.25 W	D	13	.0	6.3

S E A R C H O F E A R T H Q U A K E D A T A F I L E 2

SITE: Riverside Community Hospital

COORDINATES OF SITE ..... 33.9771 N 117.3827 W

DISTANCE PER DEGREE ..... 110.9 KM-N 92.4 KM-W

MAGNITUDE LIMITS ..... 6.0 - 8.5

TEMPORAL LIMITS ..... 1906 - 1931

SEARCH RADIUS (KM) 100

NUMBER OF YEARS OF DATA 26.00

NUMBER OF EARTHQUAKES IN FILE 35

NUMBER OF EARTHQUAKES IN AREA 4

AMEC Environment & Infrastructure, Inc.

Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site
(NOAA/CDMG DATA 1812-1905)

DATE	TIME	LATITUDE	LONGITUDE	Q	DIST	DEPTH	MAGNITUDE
02-09-1890	04:06:00	34.00 N	117.50 W	D	11	.0	7.0
12-25-1899	04:25:00	33.50 N	116.50 W	D	97	.0	7.0

S E A R C H O F E A R T H Q U A K E D A T A F I L E 3

SITE: Riverside Community Hospital

COORDINATES OF SITE ..... 33.9771 N 117.3827 W

DISTANCE PER DEGREE ..... 110.9 KM-N 92.4 KM-W

MAGNITUDE LIMITS ..... 7.0 - 8.5

TEMPORAL LIMITS ..... 1812 - 1905

SEARCH RADIUS (KM) 100

NUMBER OF YEARS OF DATA 94.00

NUMBER OF EARTHQUAKES IN FILE 9

NUMBER OF EARTHQUAKES IN AREA 2

AMEC Environment & Infrastructure, Inc.

Table 3 - continued
List of Historic Earthquakes of Magnitude 4.0 or Greater Within 100 Km of the Site

S U M M A R Y O F E A R T H Q U A K E S E A R C H

* * *

NUMBER OF HISTORIC EARTHQUAKES WITHIN 100 KM RADIUS OF SITE

MAGNITUDE RANGE	NUMBER
4.0 - 4.5	425
4.5 - 5.0	142
5.0 - 5.5	47
5.5 - 6.0	8
6.0 - 6.5	7
6.5 - 7.0	1
7.0 - 7.5	3
7.5 - 8.0	0
8.0 - 8.5	0

* * *

AMEC Environment & Infrastructure, Inc.

Table 4, Site-Specific Response Spectra
Pseudospectral Velocity in Inches/Second

5% Damping		
Period in Seconds	Maximum Considered Earthquake	Design
0.01	0.48	0.32
0.02	0.98	0.66
0.03	1.58	1.05
0.05	3.03	2.02
0.075	5.40	3.60
0.10	8.31	5.54
0.15	13.84	9.22
0.20	18.45	12.30
0.25	23.06	15.37
0.30	27.67	18.45
0.40	36.90	24.60
0.50	46.12	30.75
0.75	55.35	36.90
1.00	62.30	41.53
1.50	80.21	53.47
2.00	90.54	60.36
3.00	100.59	67.06
4.00	108.48	72.32

By: LH 1/28/13
Chkd: MM 1/28/13

Table 5, Site-Specific Response Spectra
Pseudospectral acceleration in g

5% Damping		
Period in Seconds	Maximum Considered Earthquake	Design
0.01	0.78	0.52
0.02	0.80	0.53
0.03	0.85	0.57
0.05	0.99	0.66
0.075	1.17	0.78
0.10	1.35	0.90
0.15	1.50	1.00
0.20	1.50	1.00
0.25	1.50	1.00
0.30	1.50	1.00
0.40	1.50	1.00
0.50	1.50	1.00
0.75	1.20	0.80
1.00	1.01	0.68
1.50	0.87	0.58
2.00	0.74	0.49
3.00	0.55	0.36
4.00	0.44	0.29

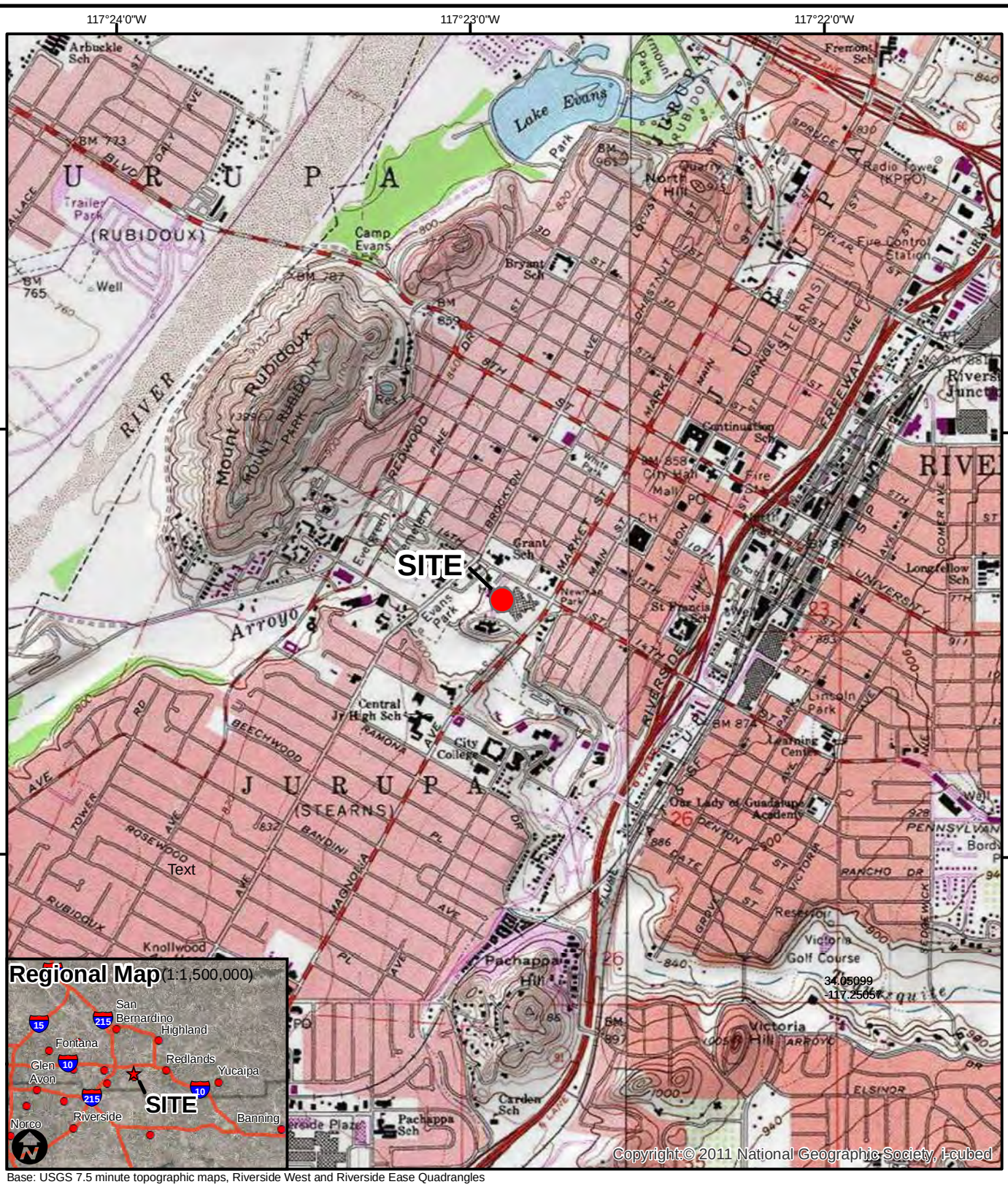
By: LH 1/28/13
Chkd: MM 1/28/13

TABLE 6. Seed Time Histories for MCE Response Spectra

Earthquake	Year	Station	Magnitude (Mw)	Fault Mechanism	Rjb (km)	Vs30 (m/s)
Imperial Valley	1979	El Centro Array #12	6.53	Strike-Slip	17.9	196.9
Imperial Valley	1979	Westmorland Fire Sta	6.53	Strike-Slip	14.8	193.7
Superstition Hills	1987	El Centro Imp. Co. Cent	6.54	Strike-Slip	18.2	192.1
Superstition Hills	1987	Wildlife Liquef. Array	6.54	Strike-Slip	23.9	207.5
Landers	1992	Barstow	7.28	Strike-Slip	34.9	370.8
Landers	1992	North Palm Springs	7.28	Strike-Slip	26.8	345.4
Kobe	1995	OSAJ	6.90	Strike-Slip	21.4	256.0
Kocaeli	1999	Iznik	7.51	Strike-Slip	30.7	274.5
Hector Mine	1999	North Palm Springs Fire Sta #36	7.13	Strike-Slip	61.8	345.4
Denali	2002	R109 (temp)	7.90	Strike-Slip	43.0	963.9

By: ET 2/26/13
Checked By: LH 2/26/13

FIGURES



Base: USGS 7.5 minute topographic maps, Riverside West and Riverside Ease Quadrangles

0 500 1,000 2,000 3,000 Feet

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6001 Rickenbacker Road
Los Angeles, California 90040
Tel: 323.889.5300
Fax: 323.721.6700

Proposed Bed Tower Expansion
Riverside Community Hospital
Riverside, California

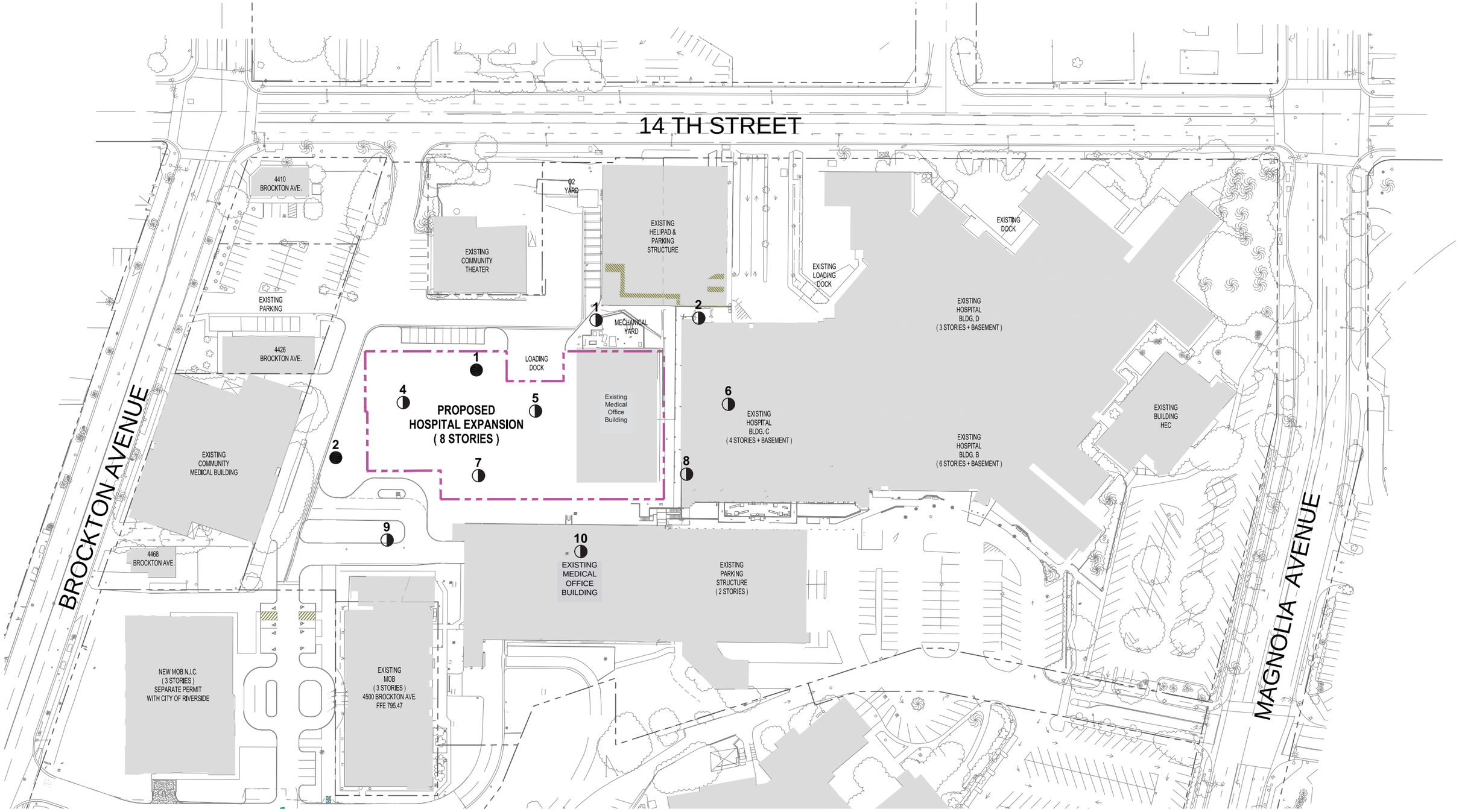
LAT: 33.9771	
LON: -117.3827	
SCALE: 1:24,000	
DRAWN: PER	
CHECK: ET	
DATE: 01-25-13	

VICINITY MAP

FIGURE: 1

PROJECT: 4953-13-0001

G:\4953_Geotech\2013\130001_Riverside_Community_Hosp\GIS\130001_Figure_1_Site_Vicinity_Map.mxd



LEGEND

2 ● Current Investigation

10 ◑ Prior Investigation (Our Job No. A-85263)

0 50' 100' 200'

SCALE: 1" = 100'

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6001 Rickenbacker Road, Los Angeles, CA 90040
Phone (323) 889-5300 Fax (323) 721-6700

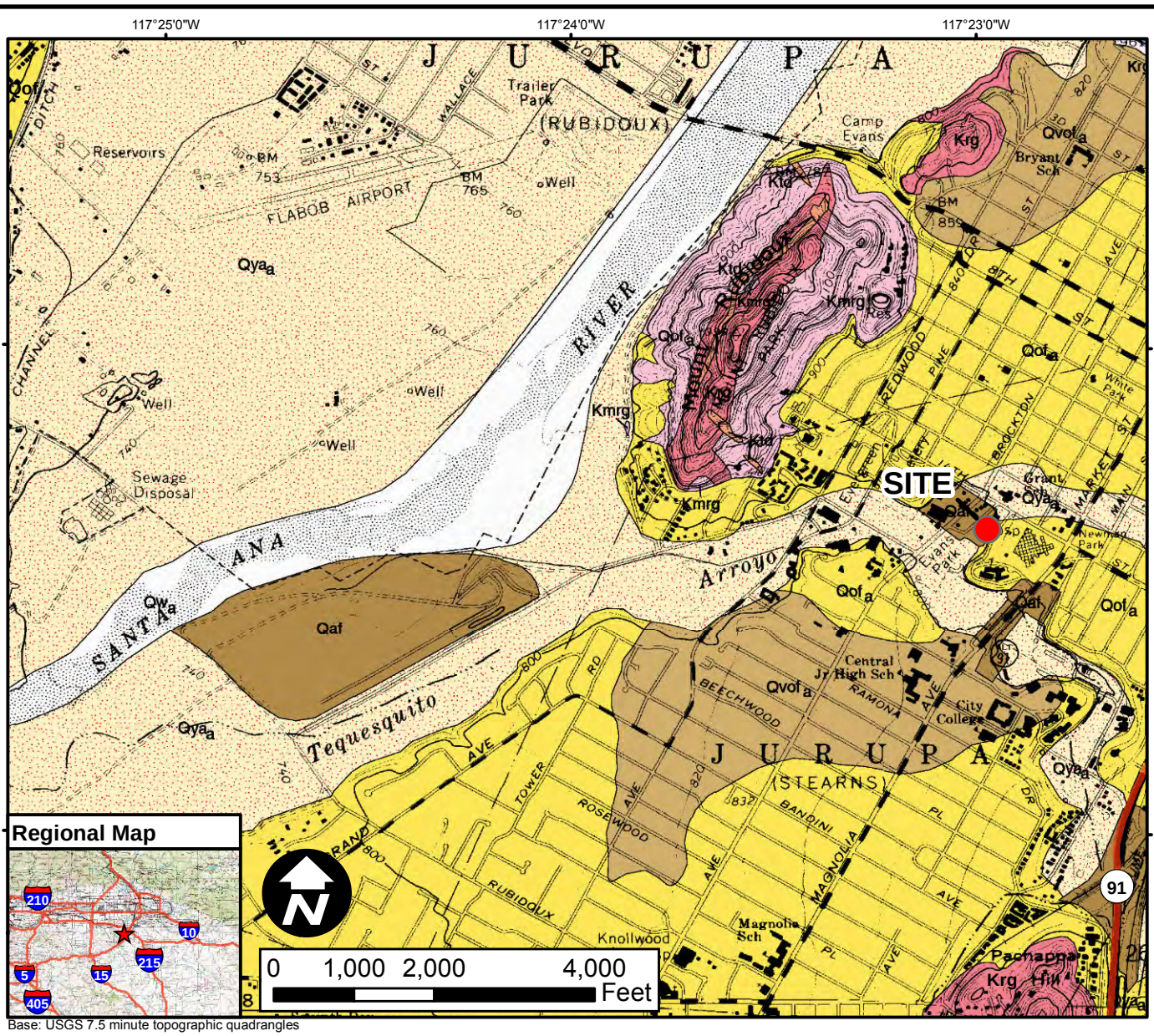
PROJECT:	4953-13-0001
LT,LNG:	
SCALE:	1" = 100'
DRAWN:	VMN
CHKD:	L.H.
PM:	M.M.
DATE:	2/04/2013

PLOT PLAN

PROPOSED BED TOWER EXPANSION
RIVERSIDE COMMUNITY HOSPITAL
RIVERSIDE, CALIFORNIA

FIGURE NO.
2

Path: P:\4953 Geotech\2013-proj\130001 Riverside Community Hosp\CAD\DWG\4953-13-0001_Fig-2_Plot-Plan.dwg [Fig-2]
Date: February 25, 2013 - 3:11pm By: vo.nguyen



Base: USGS 7.5 minute topographic quadrangles

Geologic Units

Qaf - Artificial fill (late Holocene)—Deposits of fill resulting from human construction or mining activities.

Qw - Very young wash deposits (late Holocene)—Deposits of active alluvium; confined to main channel of Santa Ana River.

Qya - Young axial channel deposits (Holocene and late Pleistocene)—Gray, unconsolidated alluvium consisting of coarse- to fine-grained sand and lesser gravel and silt flanking Santa Ana River channel and its tributaries.

Qof - Old alluvial fan deposits (late to middle Pleistocene)—Indurated, to slightly indurated, sandy, alluvial fan deposits. Covers extensive areas north and south of Santa Ana River.

Qvof - Very old alluvial fan deposits (early Pleistocene)—Mostly well dissected, well-indurated, reddish-brown sand deposits. Commonly contains duripans and locally silcretes.

Ktd - Tonalite dikes of Mount Rubidoux (Cretaceous)—Light gray, fine- to medium-grained, massive to foliated, hornblende-clinopyroxenehypersthene-biotite tonalite.

Kmrg - Granite of Mount Rubidoux (Cretaceous)—Massive granite characterized by coarse grain size and presence of hypersthene and fayalitic olivine.

Krg - Granite of the Riverside area (Cretaceous)—Medium- to coarse-grained, massive to faintly foliated, leucocratic biotite granite.

Contacts

- contact, location accurate
- contact, location approximate
- contact, location concealed
- contact, location inferred

Morton, D.M., and Cox, B.F., 2001, Geologic map of the Riverside West 7.5' quadrangle, Riverside County, California: U.S. Geological Survey, Open-File Report 01-451, scale 1:24,000: http://geopubs.wr.usgs.gov/open-file/of01-451.

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Fax: 323.721.6700

Proposed Bed Tower Expansion
Riverside Community Hospital
Riverside, California

LAT:	33.9771
LON:	-117.3827
SCALE:	1:24,000
DRAWN:	PER
CHECK:	MAE
DATE:	02-26-13

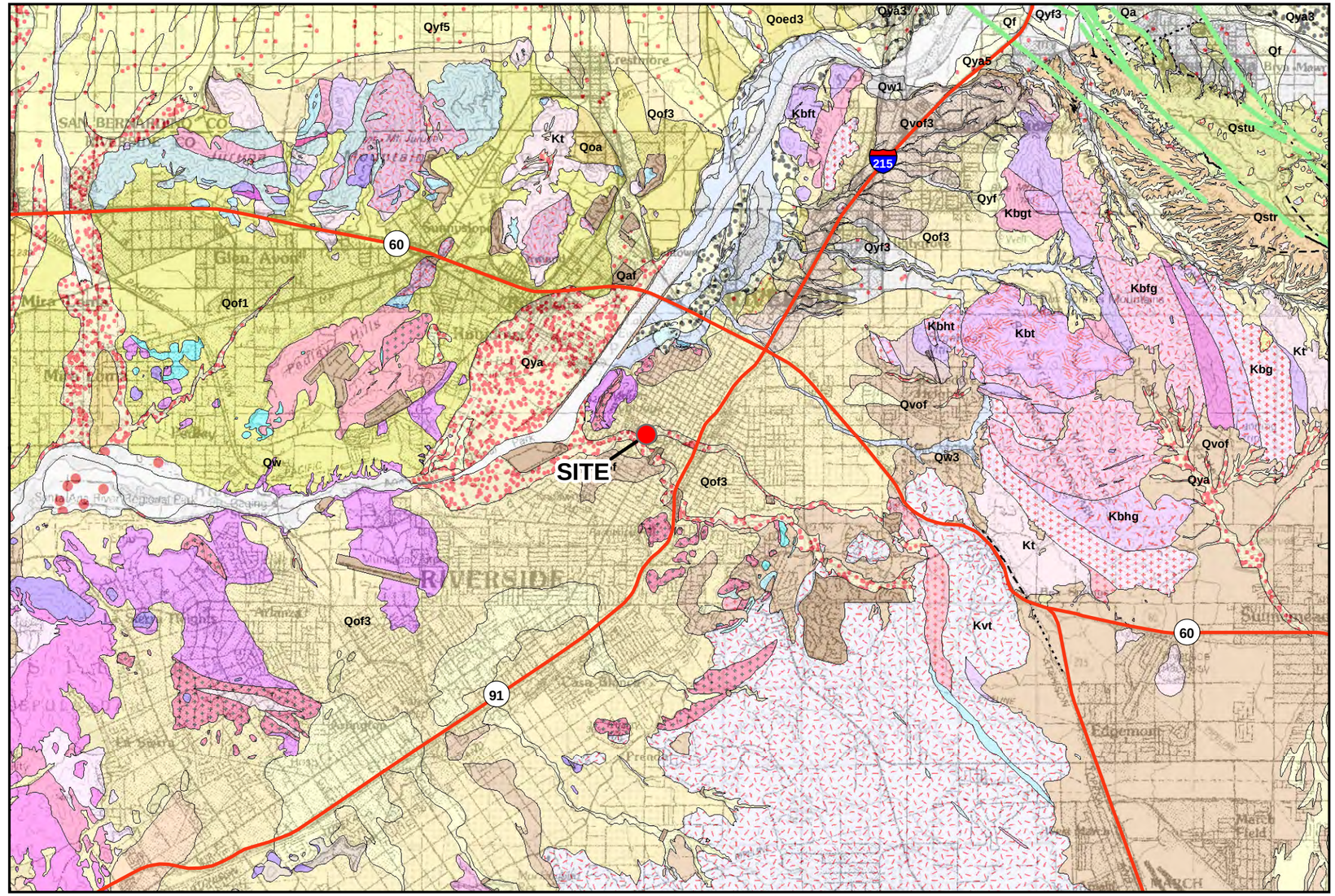
LOCAL GEOLOGIC MAP

FIGURE: 3

PROJECT: 4953-13-0001

Geologic Units

Qaf - Artificial fill
Qc - Very young colluvial deposits
Qa - Very young axial-channel deposits
Qls - Very young landslide deposits
Qf - Very young alluvial-fan deposits
Qw - Very young wash deposits
Qyw - Young wash deposits
Qyls - Young landslide deposits
Qya - Young axial-channel deposits
Qyf - Young alluvial-fan deposits
Qyed - Young eolian deposits (dune sand)
Qyes - Young eolian deposits (sheet sand)
Qoa - Old axial-channel deposits
Qoed - Old eolian deposits (dune sand)
Qof - Old alluvial-fan deposits
Qols - Old landslide deposits
Qvoa - Very old axial-channel deposits
Qvof - Very old alluvial-fan deposits
Qvols - Very old landslide deposits
Qvor - Very old regolith
Qvos - Very old surficial deposits
Qstcq - San Timoteo Beds
Qstr - San Timoteo Beds
Qsts - San Timoteo Beds
Qstu - San Timoteo Beds
Tgh - Hypabyssal granitic rocks
Tsg - Conglomerate, sandstone, and arkose
Tstd - San Timoteo Beds
Tstl - San Timoteo Beds
Tstm - San Timoteo Beds
gg - Gneissic granitoid rocks and gneiss
Kba - Box Springs plutonic complex
Kcc - Monzogranite of City Creek
Kg - Granitic dikes
Khg - Heterogeneous granitic rocks
Kmgt - Monzogranite and tonalite, undifferentiated
Kps - Pelona Schist
Krg - Granite of Riverside area
Kt - Tonalite, undifferentiated
Kvt - Val Verde Pluton
Mzfg - Foliated granitoid rocks
Pzmp - Marble, Peninsular Ranges
Pzmp - Marble, Peninsular Ranges
Pzmp - Marble, Peninsular Ranges
Pzms - Marble and schist, undifferentiated
Pzsgp - Biotite schist and gneiss
Pzsgp - Biotite schist and gneiss
Pzsgp - Biotite schist and gneiss



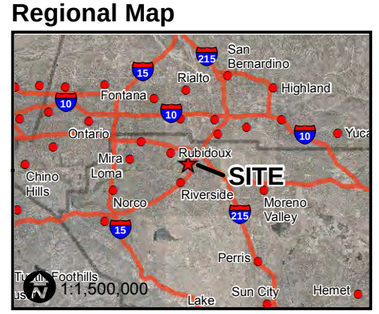
Morton, D.M., Miller, F.K., 2006, "Geologic Map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California", U.S. Geological Survey Open-File Report 2006-1217 Version 1.0.

Geologic Contacts

- contact, identity and existence certain, location accurate
- contact, identity and existence certain, location approximate
- contact, identity and existence certain, location concealed
- contact, identity and existence certain, location inferred
- fault, identity and existence certain, location accurate
- fault, identity and existence certain, location approximate
- fault, identity and existence certain, location concealed
- fault, identity and existence certain, location inferred
- fault, identity or existence questionable, location accurate
- fault, identity or existence questionable, location concealed

(Queried where contacts are questionable)

Regional Map



0 0.5 1 2 3 4 Miles

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Fax: 323.721.6700

Proposed Bed Tower Expansion
Riverside Community Hospital
Riverside, California

LAT: 33.9771 LON: -117.3827	REGIONAL GEOLOGIC MAP	FIGURE:	
SCALE: 1:100,000		4	
DRAWN: PER			
CHECK: RM		PROJECT: 4953-13-0001	
DATE: 01-16-13			

Path: G:\4953_Geotech\2013\130001_Riverside_Community_Hosp\GIS\130001_Figure_4_Regional_Geologic_Map.mxd

M:5.8 9/5/1883
M:5.7 2/16/1919
M:5.5 10/23/1916
M:5.1 9/21/1941
M:5.4 6/10/1988
M:5.6 1/10/1857
M:5.9 4/12/1880
M:6.3 1/16/1857
M:5.1 9/26/1929
M:6.0 5/31/1854
M:5.0 8/5/1930
M:5.5 6/29/1926
M:5.5 3/25/1806
M:5.5 7/1/1941
M:6.6 2/9/1971
M:5.0 6/26/1995
M:5.1 4/26/1997
M:5.8 4/4/1893
M:5.2 3/20/1994
M:7.5 12/8/1812
M:6.2 7/30/1894
M:6.4 7/22/1899
M:5.8 6/28/1991
M:5.5 4/0/1803
M:5.6 8/28/1889
M:5.2 9/12/1970
M:6.0 12/16/1858
M:5.9 7/22/1899
M:5.0 12/3/1988
M:5.5 2/28/1990
M:5.5 6/14/1892
M:6.7 1/17/1994
M:6.0 7/11/1855
M:6.0 9/24/1827
M:5.0 8/4/1927
M:6.0 7/28/1769
M:5.9 10/1/1987
M:5.4 7/29/2008
M: 7.0 2/09/1890
SITE
M:5.2 1/1/1979
M:5.2 8/31/1930
M:5.1 11/14/1941
M:6.4 3/11/1933
M:5.2 5/31/1938
M:6.0 5/15/1910
M:5.0 5/13/1910
M:6.8 4/21/1918
M:5.3 9/23/1963
M:5.5 10/2/1928
M:5.5 6/6/1918
M:5.2 6/12/2005
M:5.8 4/11/1910
M:5.0 10/31/2001
M:5.3 2/25/1980
M:5.3 12/4/1992
M:5.4 6/28/1992
M:5.3 11/27/1992
M:5.3 8/29/1943
M:6.3 6/28/1992
M:5.8 9/20/1907
M:5.2 8/17/1992
M:5.5 1/16/1930
M:5.1 1/16/1930
M:5.5 6/28/1992
M:5.6 2/7/1889
M:5.0 6/28/1992
M:6.2 7/23/1923
M:5.5 11/22/1880
M:5.9 12/19/1880
M:5.2 6/12/1944
M:5.7 7/8/1986
M:5.0 12/16/1988
M:5.3 7/24/1947
M:6.7 12/25/1899
M:5.3 1/1/1975
Explanation
Earthquakes
Approximate Epicentral Area of Earthquake
Events ≥ 7.0
Events 6.0 - 6.9
Events 5.0 - 5.9
Faults
Historic Fault Displacement
Holocene Fault Displacement
Evidence of Late Quaternary Fault Displacement
Undivided Quaternary Faults
Bar and ball on downthrown side (relative or apparent)
Arrows along fault indicate relative or apparent direction of lateral movement
Arrows on fault indicates direction of dip
Low angle fault identified with barbs on upper plate. Fault surface generally dips less than 45°but locally may have been subsequently steepened.
0 10 20 40 Miles
REFERENCES:
Jennings, C.W. and Bryant, W.A., 2010,"Fault Activity Map of California," California Geological Survey, GDM-006, May 2010
Earthquake Catalogs: California Geological Survey, 1769-1932; Southern California Earthquake Center, 1932-2011.
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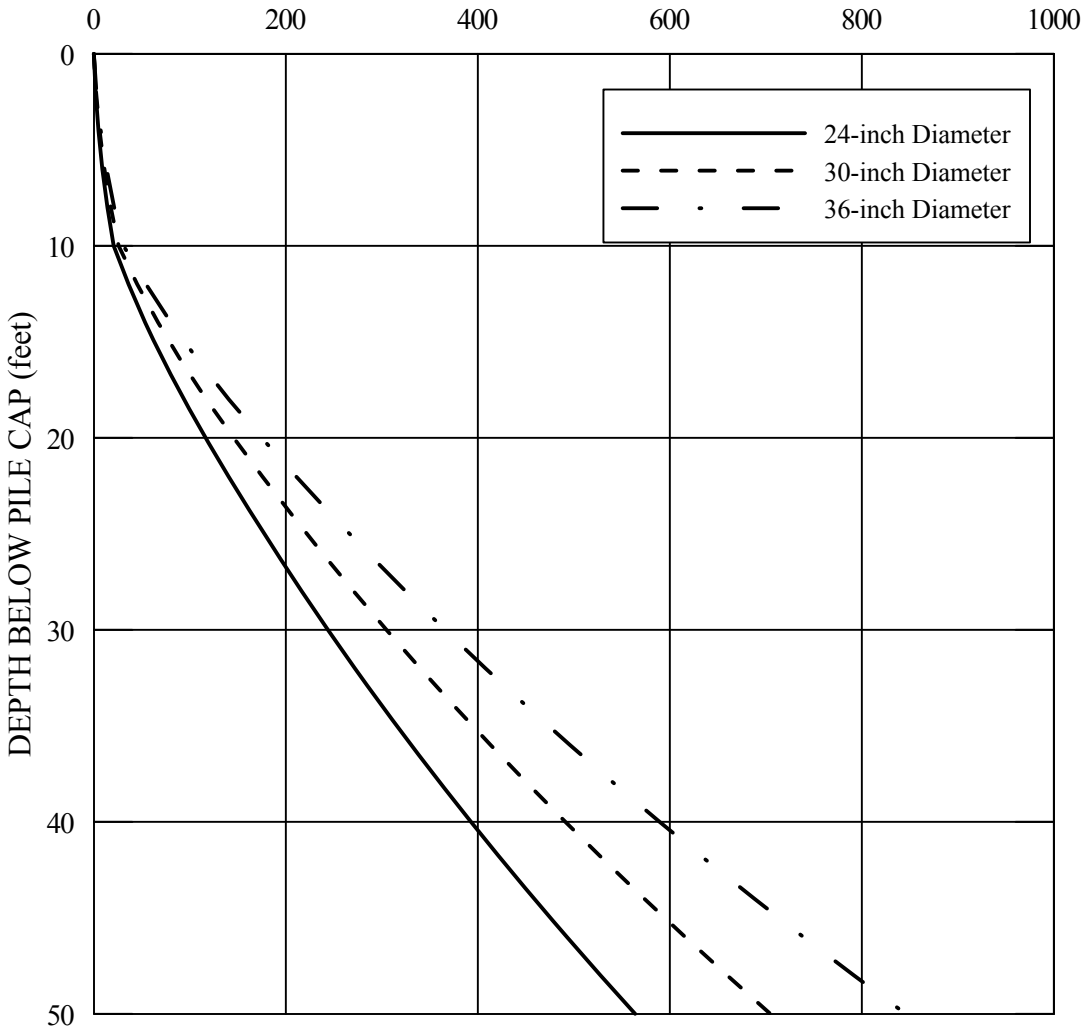
Proposed Bed Tower Expansion
Riverside Community Hospital
Riverside, California
LAT: 33.9771
LON: -117.3827
SCALE: 1:750,000
DRAWN: PER
CHECK: RM
DATE: 01-25-13
REGIONAL FAULTS AND SEISMICITY MAP
FIGURE: 5
PROJECT: 4953-13-0001
Path: G:\4953_Geotech\2013\130001_Riverside_Community_Hosp\GIS\130001_Figure_5_Faults_Seismicity_Map.mxd

ULTIMATE DOWNWARD PILE CAPACITY (kips)



NOTES:

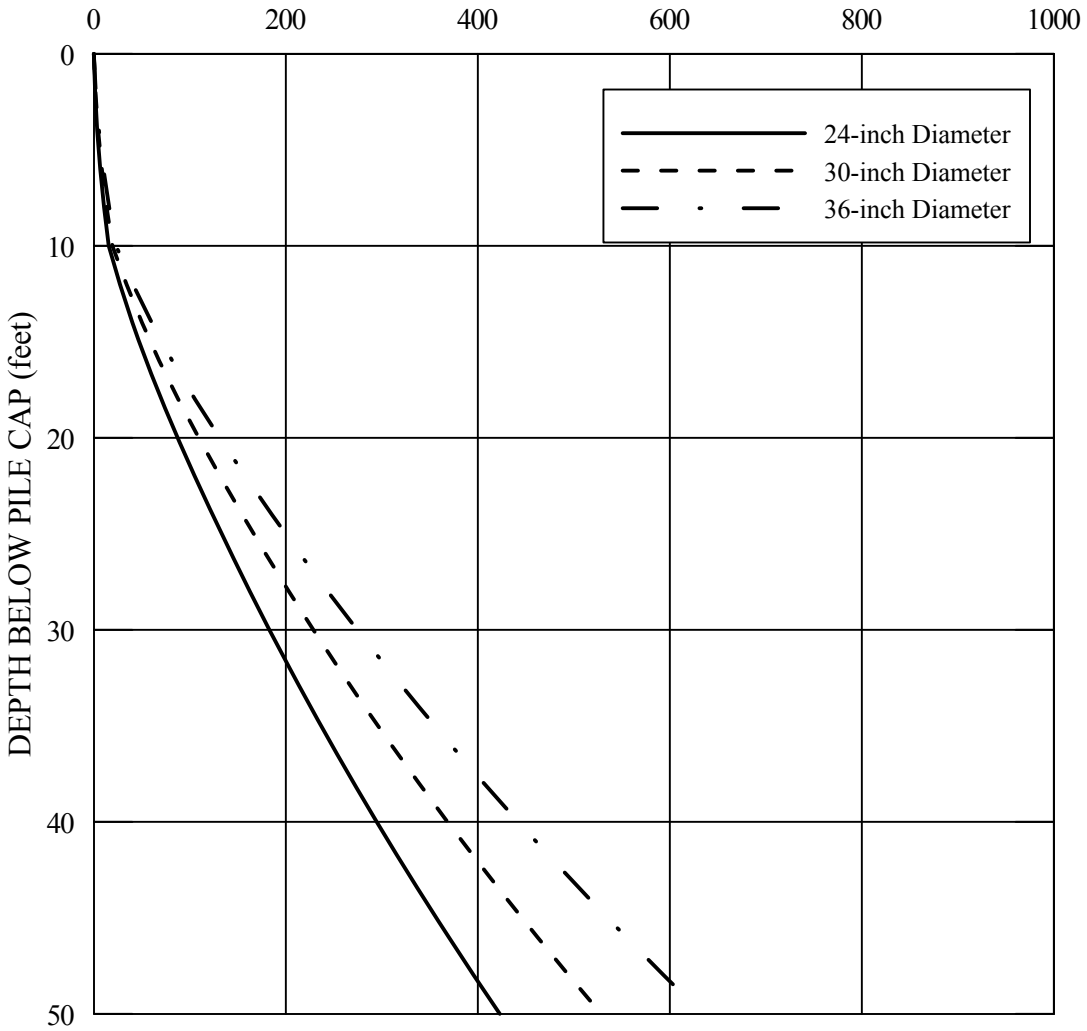
(1) The allowable capacities can be obtained by divided the indicated value by a factor of safety of 2.0 or the structural overstrength factor, which is greater.

(2) Piles in groups should be spaced a minimum of 3 pile diameters on centers.

(3) The indicated values are based on the strength of the soils; the actual pile capacities may be limited to lesser values by the strength of the piles.

Prepared/Date: ET 1/24/12
Checked/Date: LH 1/25/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California	amec	DRILLED PILE DOWNWARD CAPACITIES Project No. 4953-13-0001 Figure 6.1



NOTES:

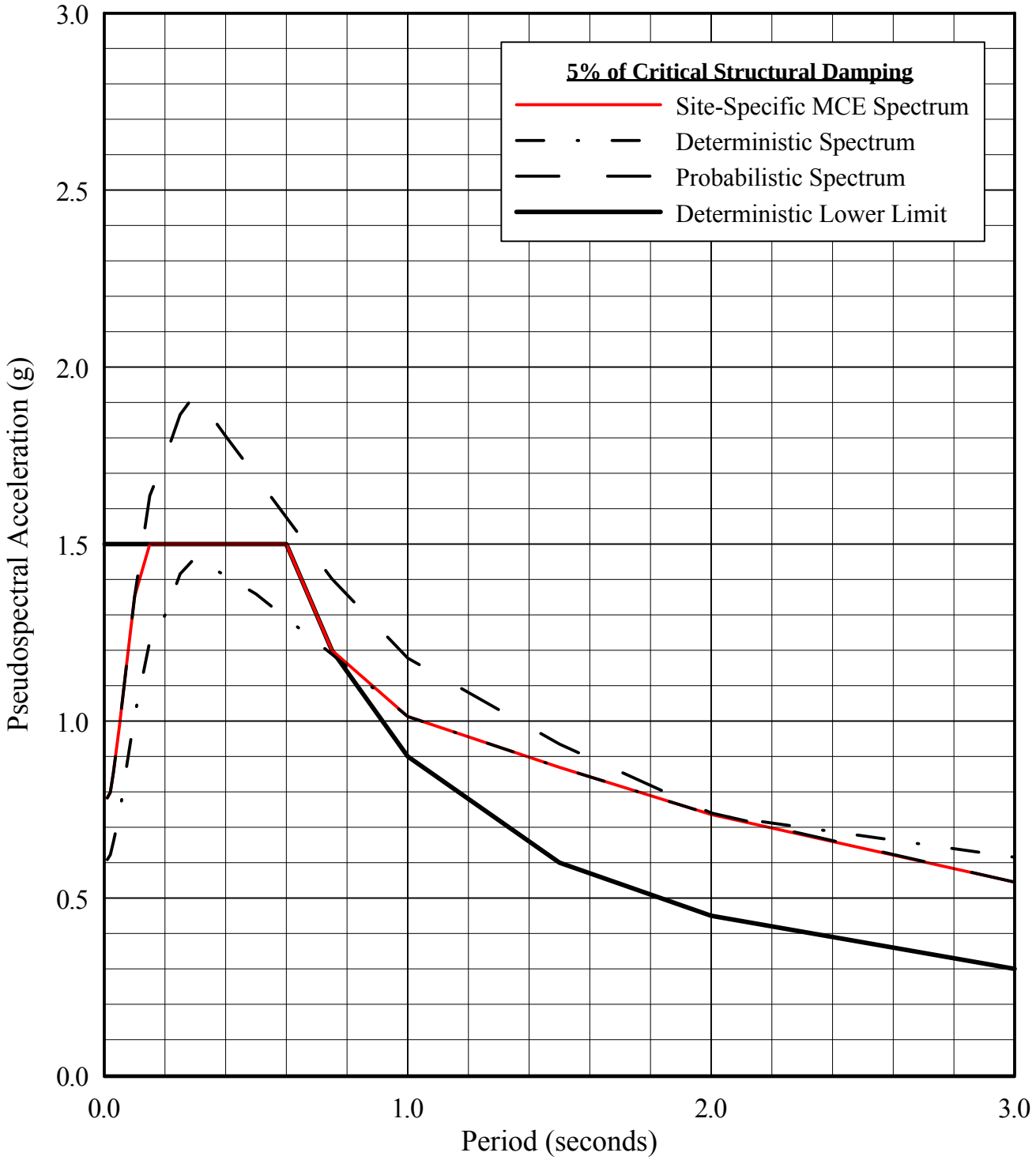
(1) The allowable capacities can be obtained by divided the indicated value by a factor of safety of 2.0 or the structural overstrength factor, which is greater.

(2) Piles in groups should be spaced a minimum of 3 pile diameters on centers.

(3) The indicated values are based on the strength of the soils; the actual pile capacities may be limited to lesser values by the strength of the piles.

Prepared/Date: LH 1/24/12
Checked/Date: ET 1/24/12

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California	amec	DRILLED PILE UPWARD CAPACITIES Project No. 4953-13-0001 Figure 6.2

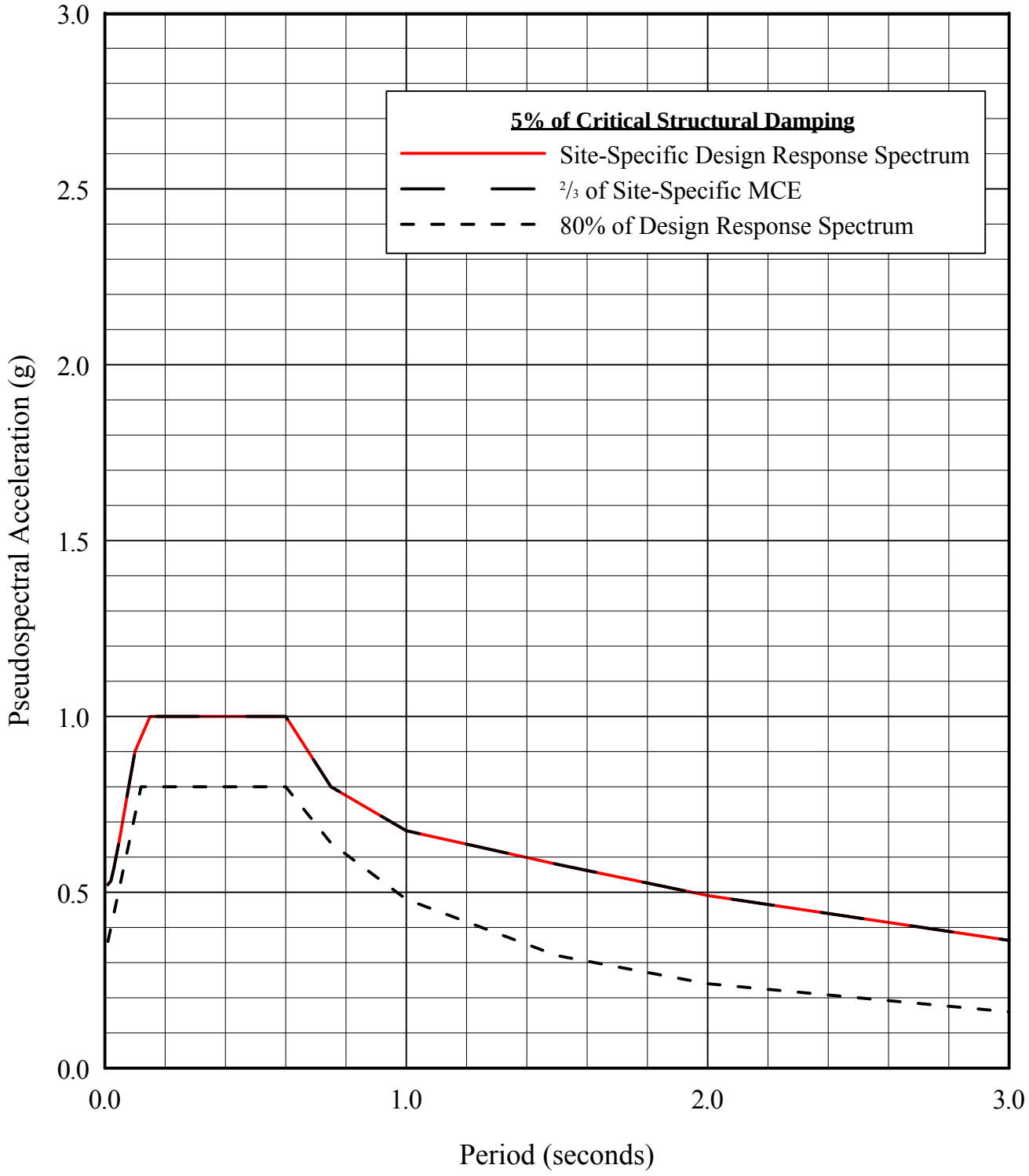


NOTES: Probabilistic spectrum was computed for a ground motion level with a 2% probability of being exceeded in 50 years.

Deterministic spectrum is governed by the deterministic events occuring on San Jacinto Fault

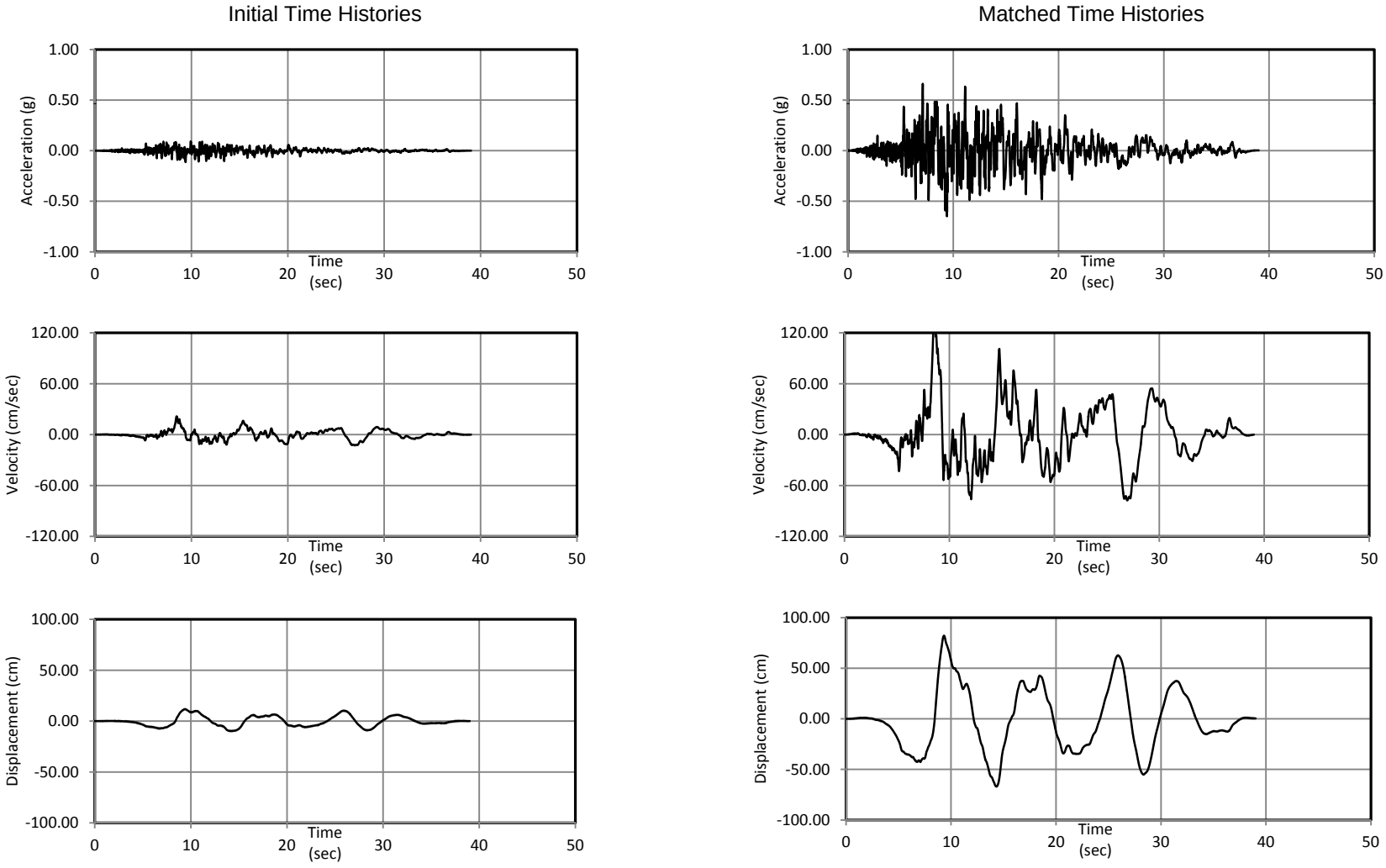
Prepared/Date: LH 1/14/13
Checked/Date: ET 1/14/13

Proposed Bed Tower Expansion Riverside Community Hospital 4445 Magnolia Avenue Riverside, California	amec	HORIZONTAL RESPONSE SPECTRA Components of the Site-Specific Maximum Considered Earthquake (MCE) Response Spectrum Project No. 4953-13-0001 Figure 7-1



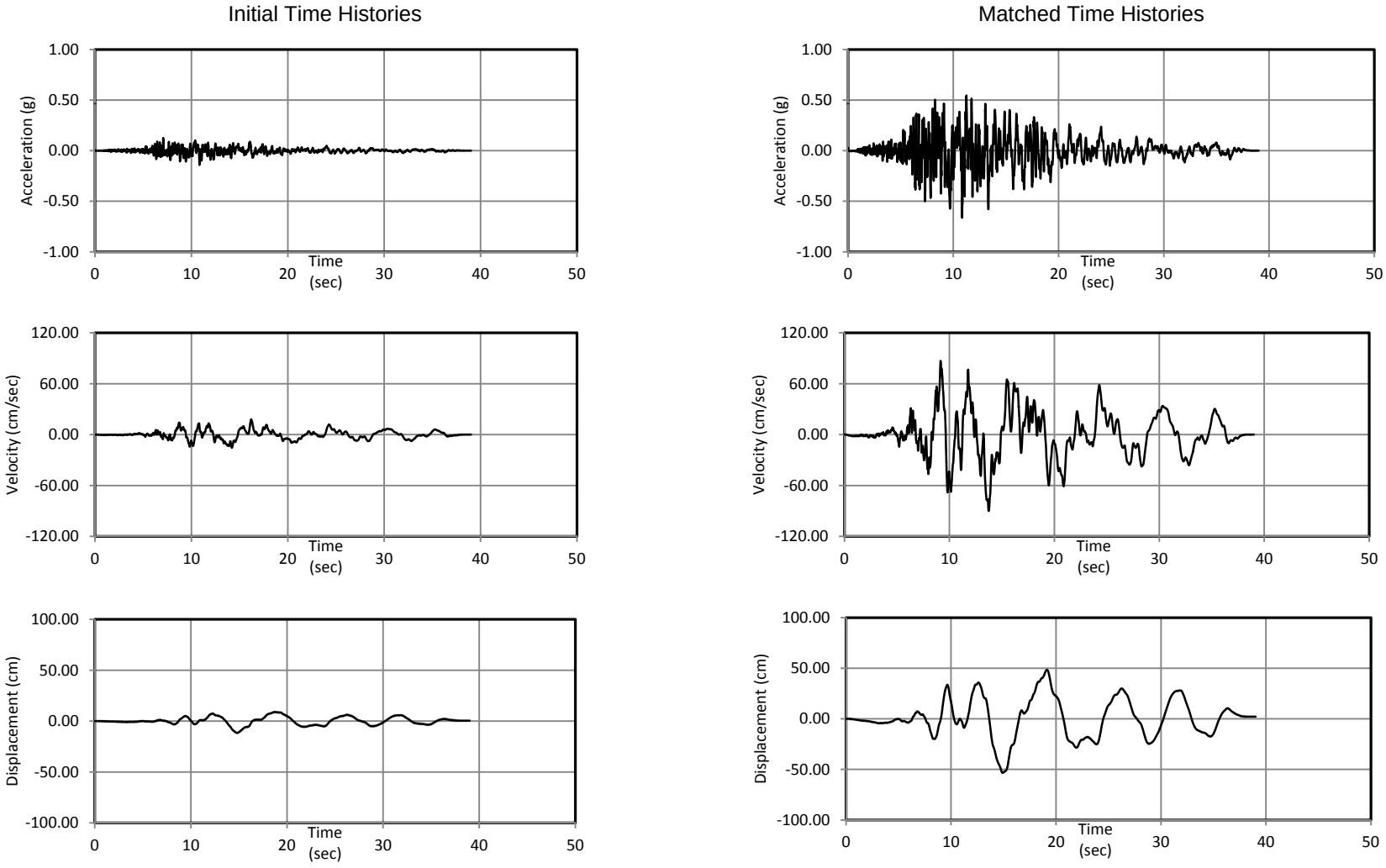
Prepared/Date: LH 1/14/13
Checked/Date: ET 1/14/13

Proposed Bed Tower Expansion Riverside Community Hospital 4445 Magnolia Avenue Riverside, California	amec	HORIZONTAL RESPONSE SPECTRA Components of the Site-Specific Design Response Spectrum Project No. 4953-13-0001 Figure 7.2



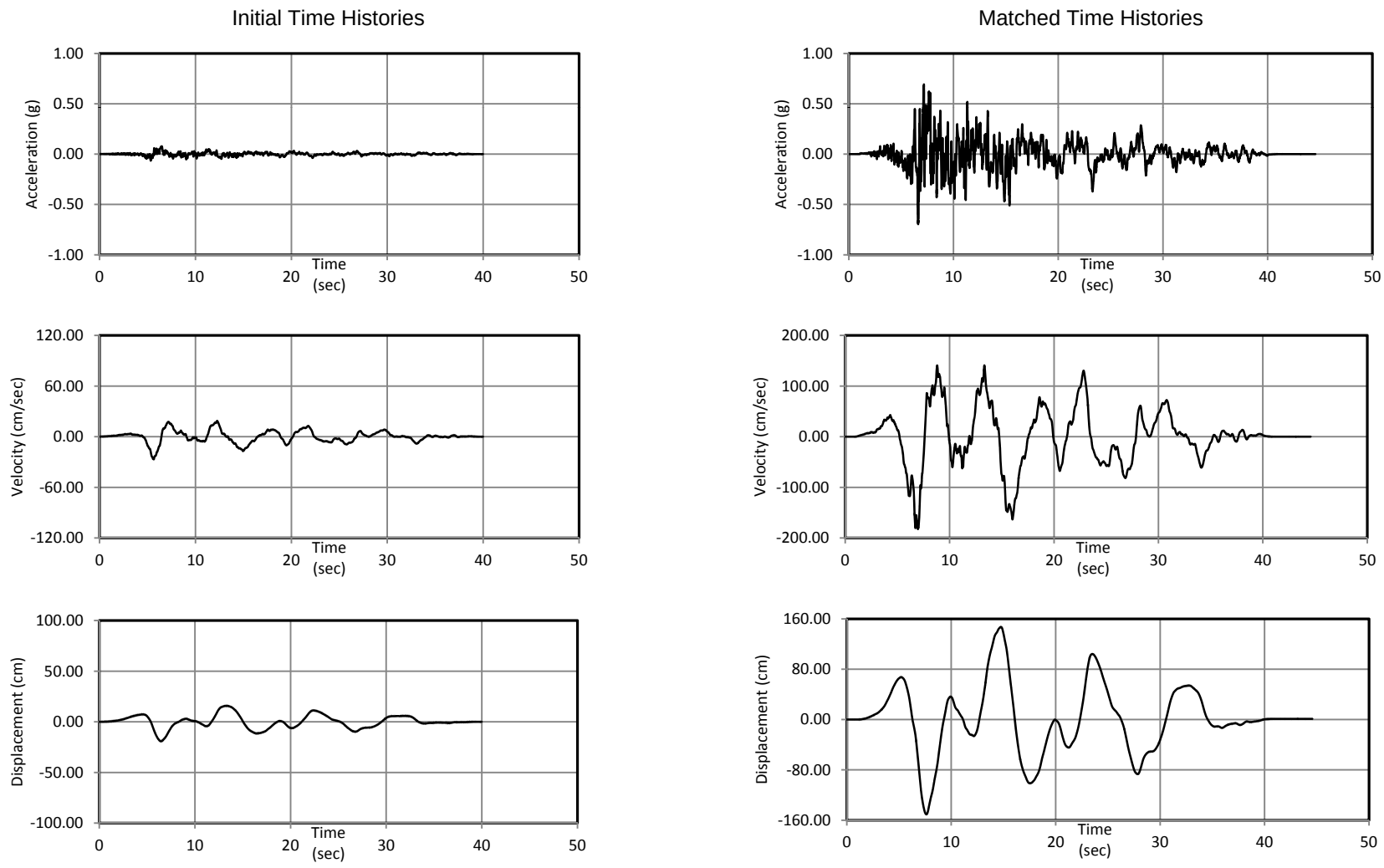
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1979 Imperial Valley (Mw = 6.53) Record: El Centro Array #12 (NGA No. 175) - Fault Normal Figure 8.1a



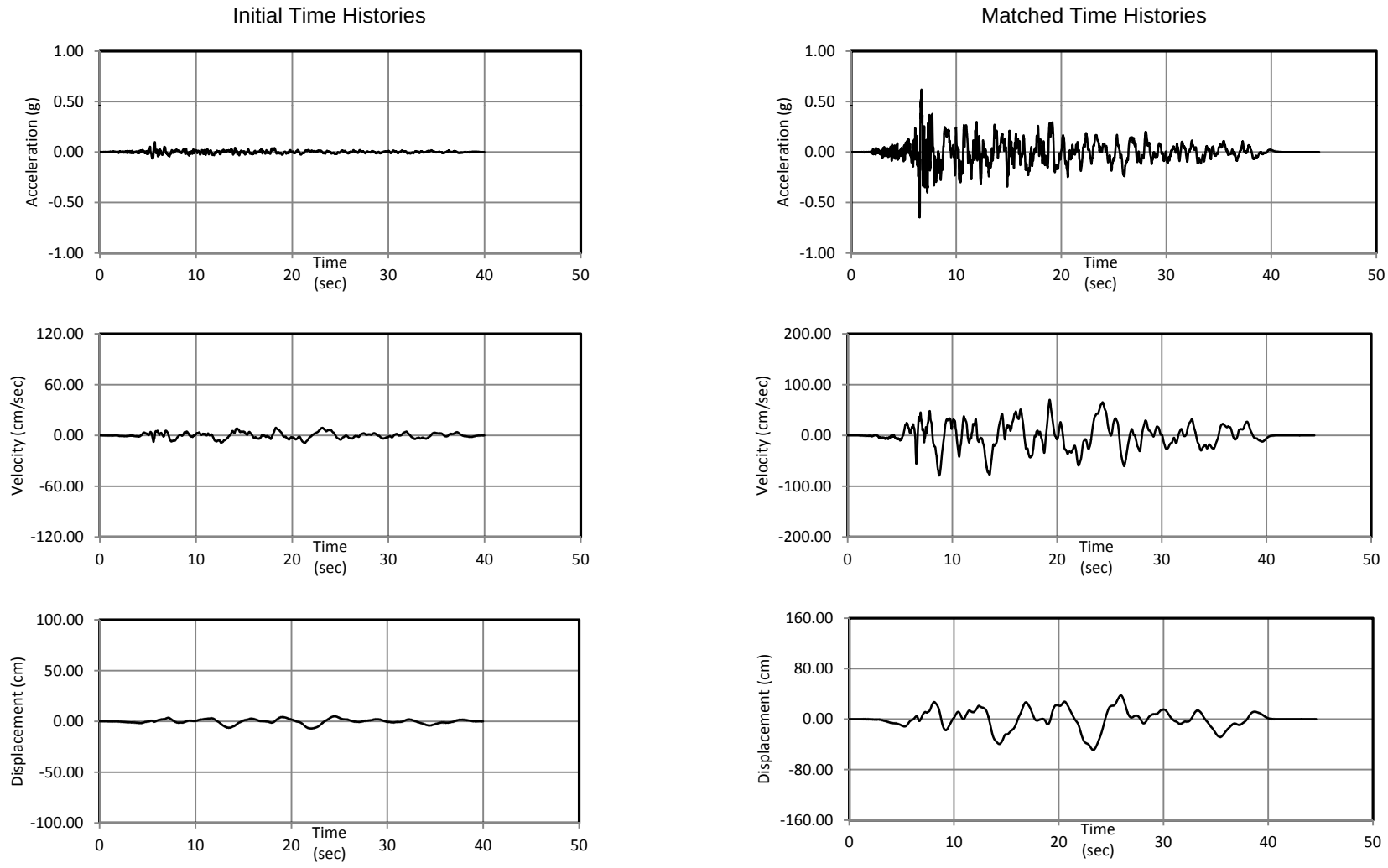
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1979 Imperial Valley (Mw = 6.53) Record: El Centro Array #12 (NGA No. 175) - Fault Parallel Figure 8.1b



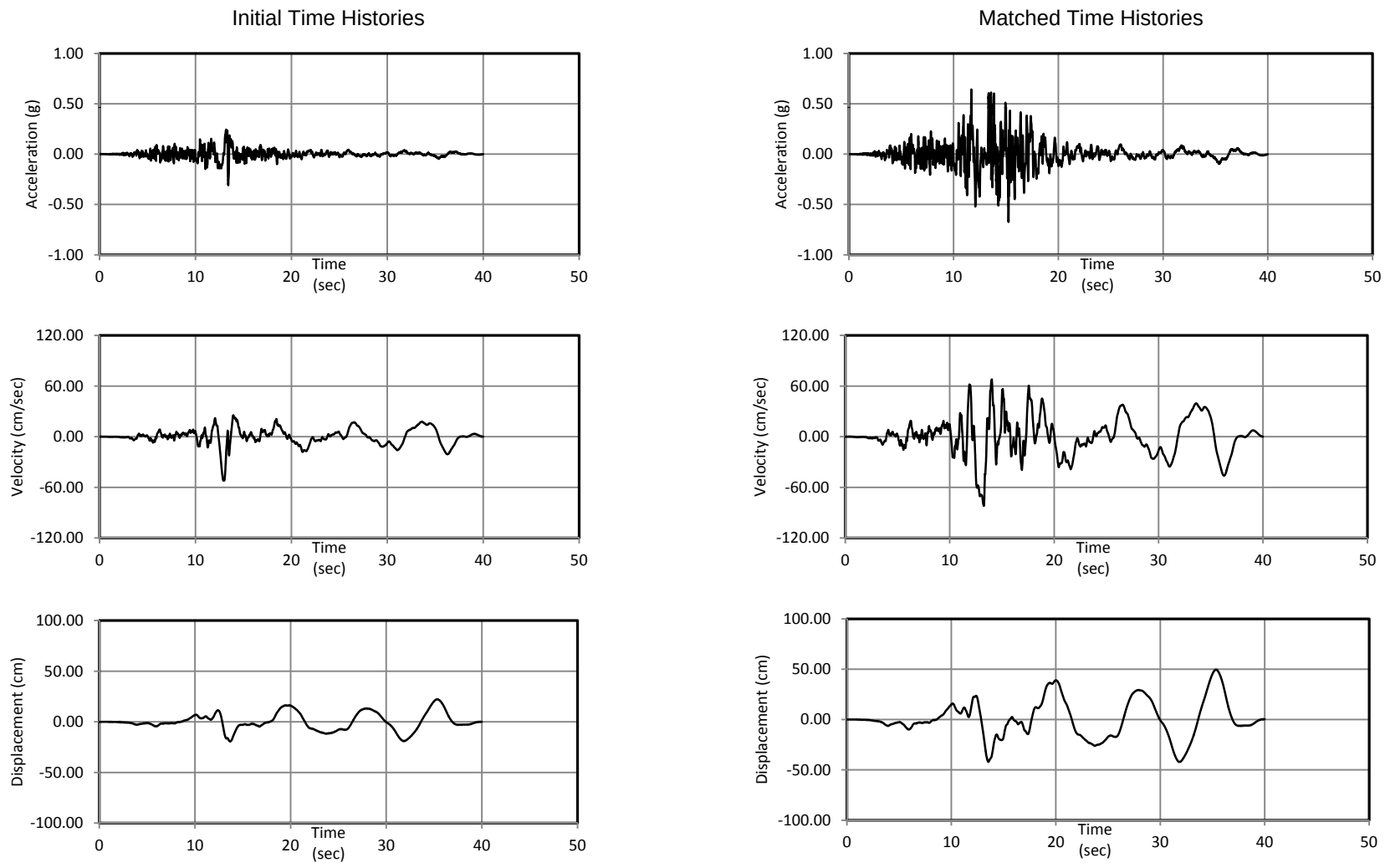
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1979 Imperial Valley (Mw = 6.53) Record: Westmorland Fire Sta.(NGA No. 192)-Fault Normal Figure 8.2a



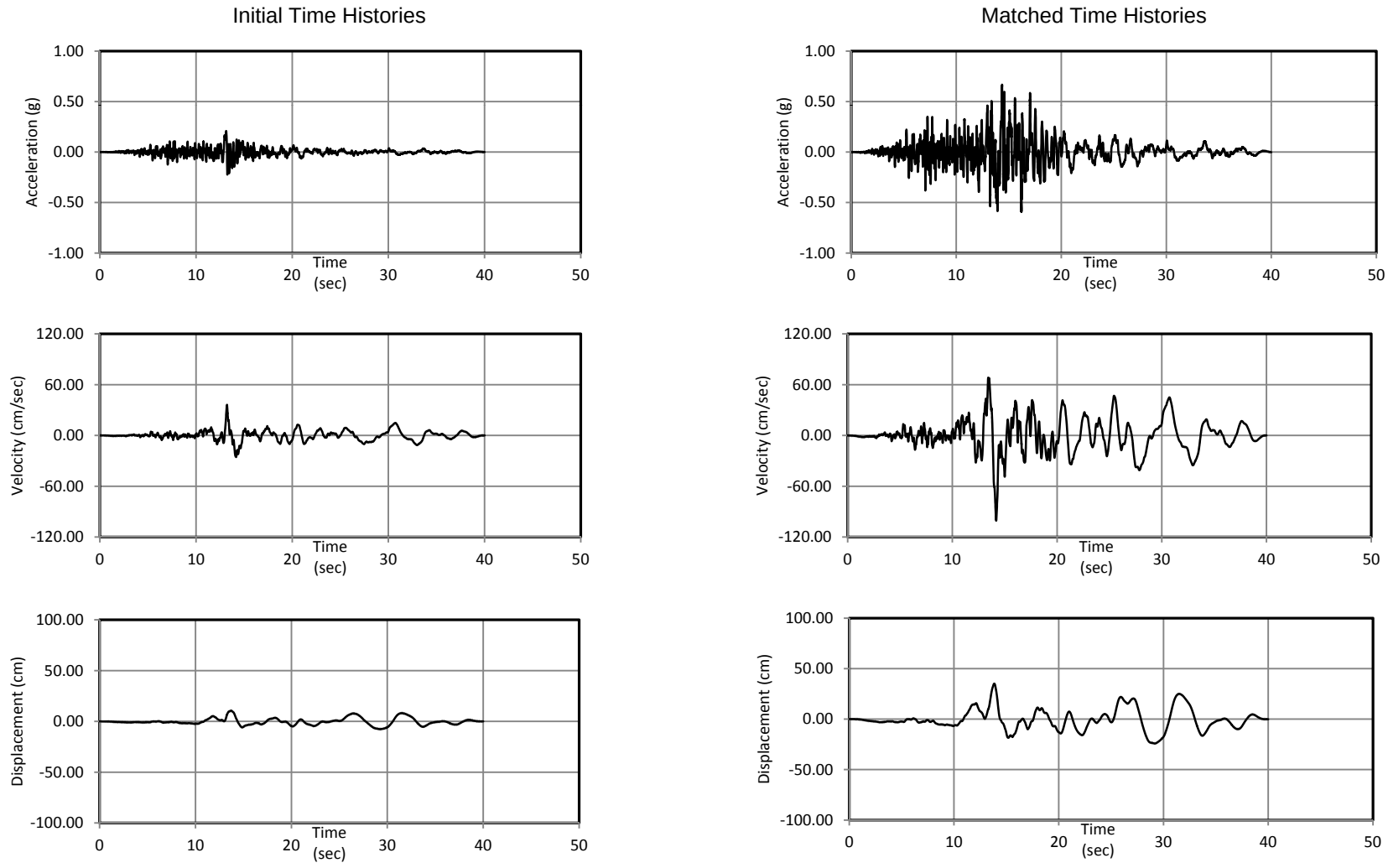
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1979 Imperial Valley (Mw = 6.53) Record: Westmorland Fire Sta.(NGA No. 192)-Fault Parallel Figure 8.2b



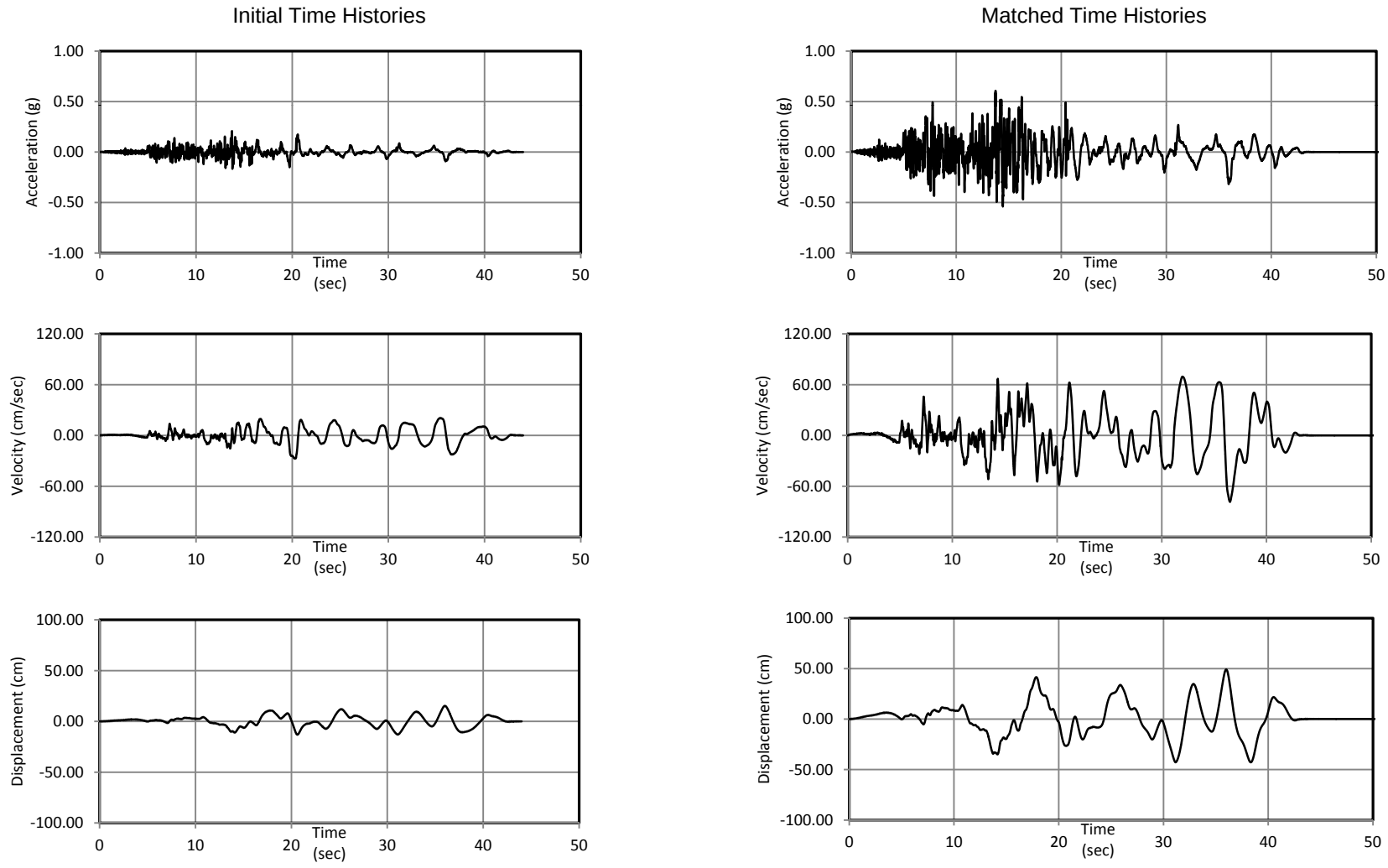
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1987 Superstition Hills (Mw = 6.54) Record: El Centro Imp Co Cent (NGA No. 721)-Fault Normal Figure 8.3a



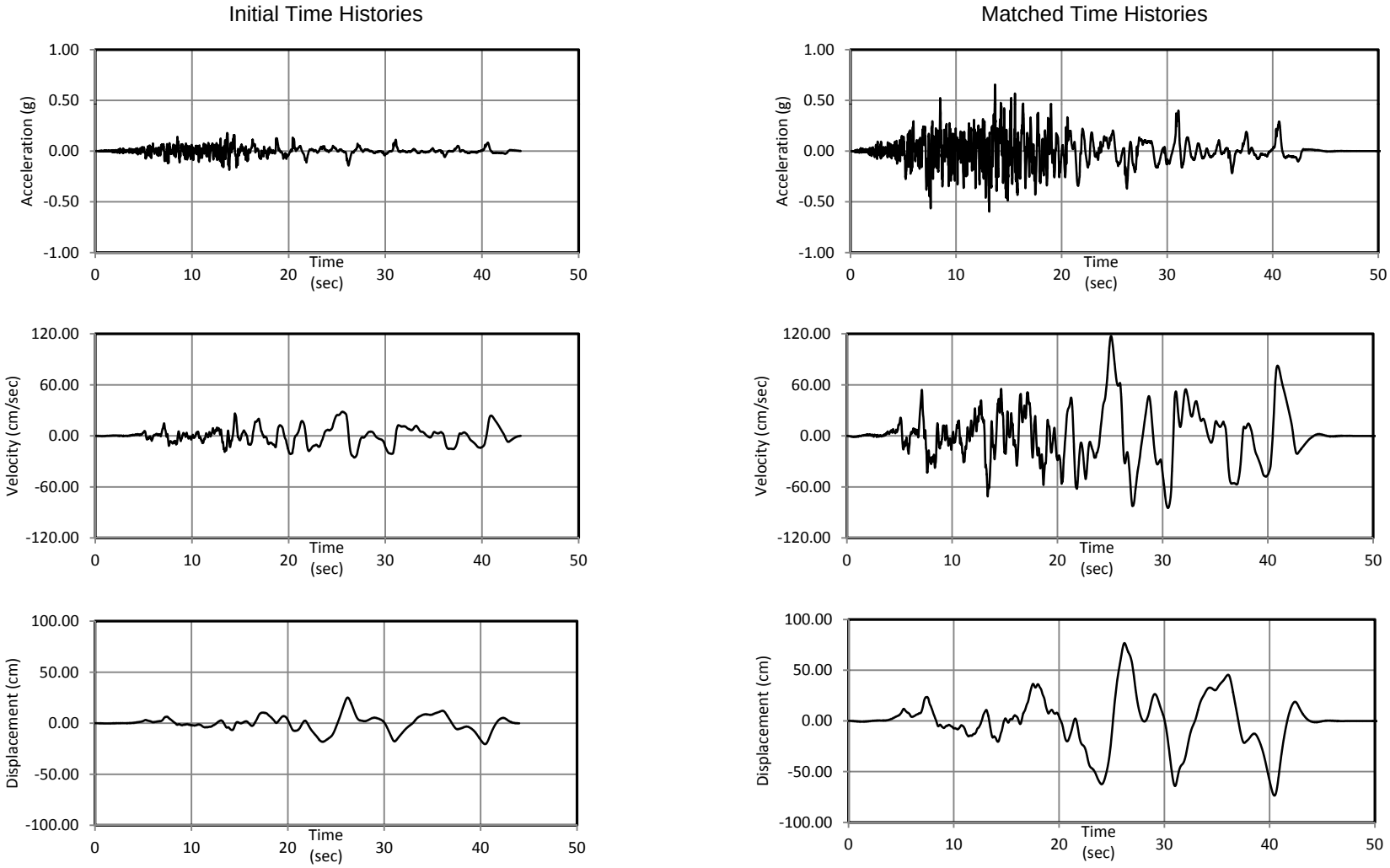
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1987 Superstition Hills (Mw = 6.54) Record: El Centro Imp Co Cent (NGA No. 721)-Fault Parallel Figure 8.3b



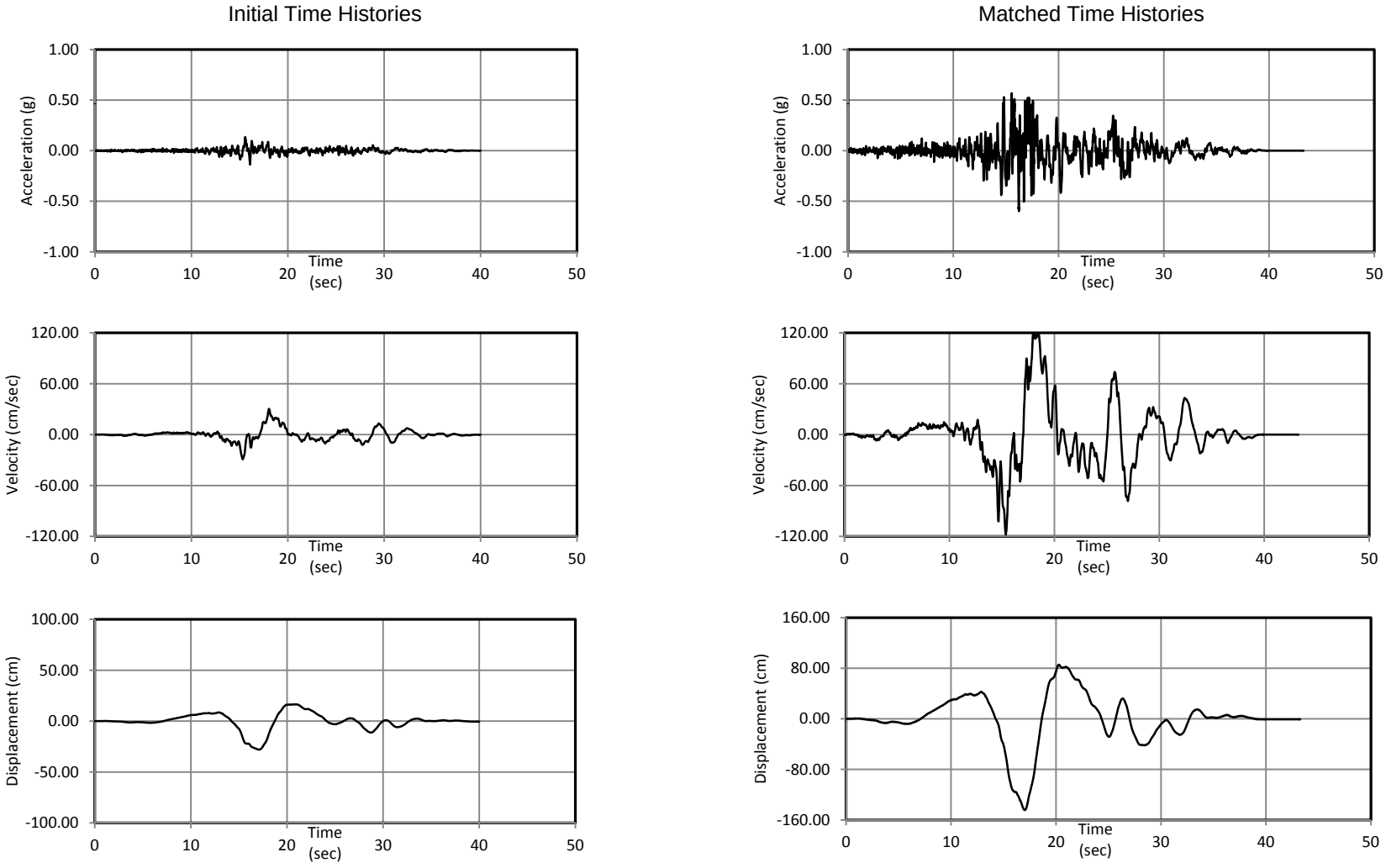
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1987 Superstition Hills (Mw = 6.54) Record: Wildlife Liquef. Array (NGA No. 729) - Fault Normal Figure 8.4a



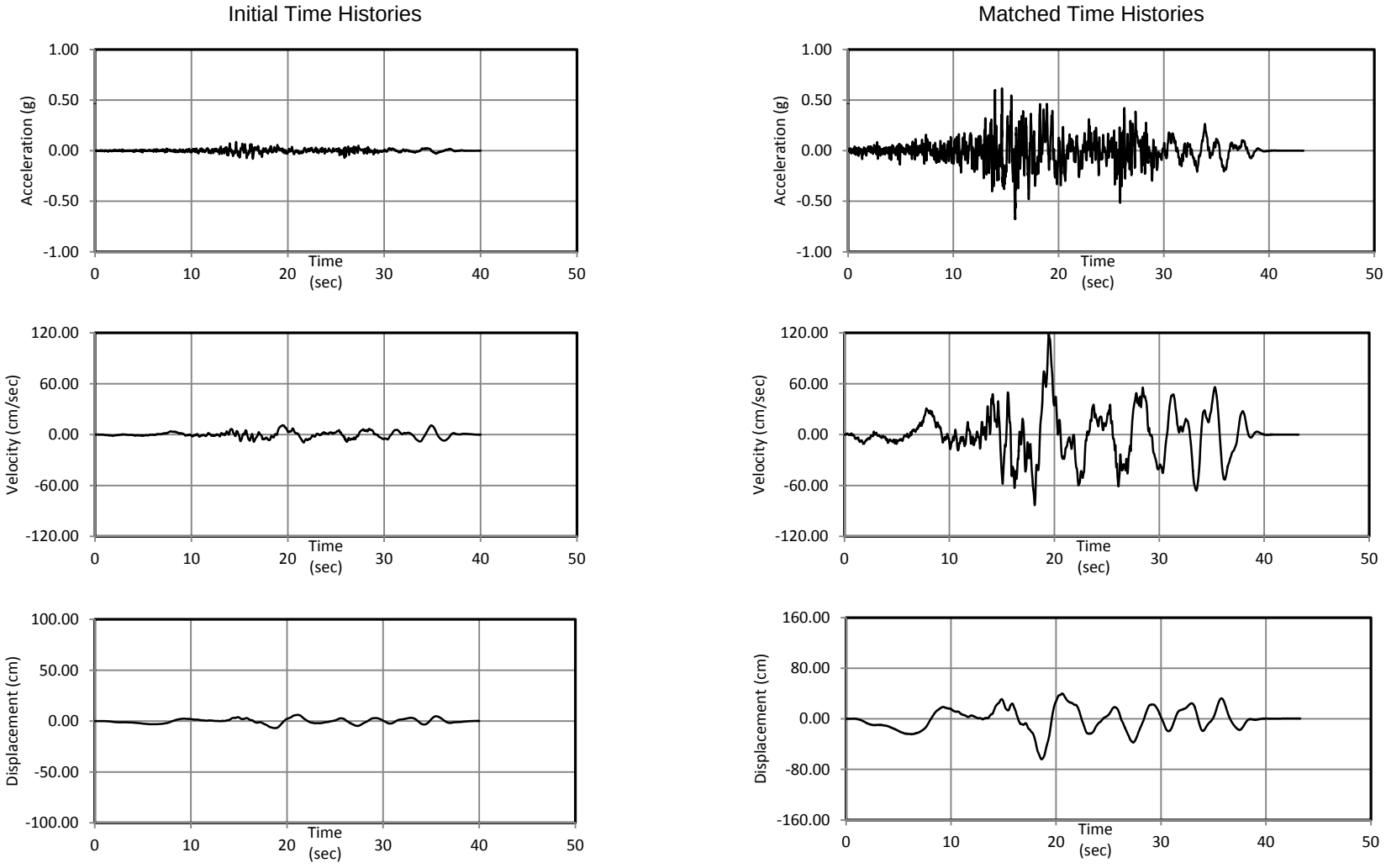
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1987 Superstition Hills (Mw = 6.54) Record: Wildlife Liquef. Array (NGA No. 729) - Fault Parallel Figure 8.4b



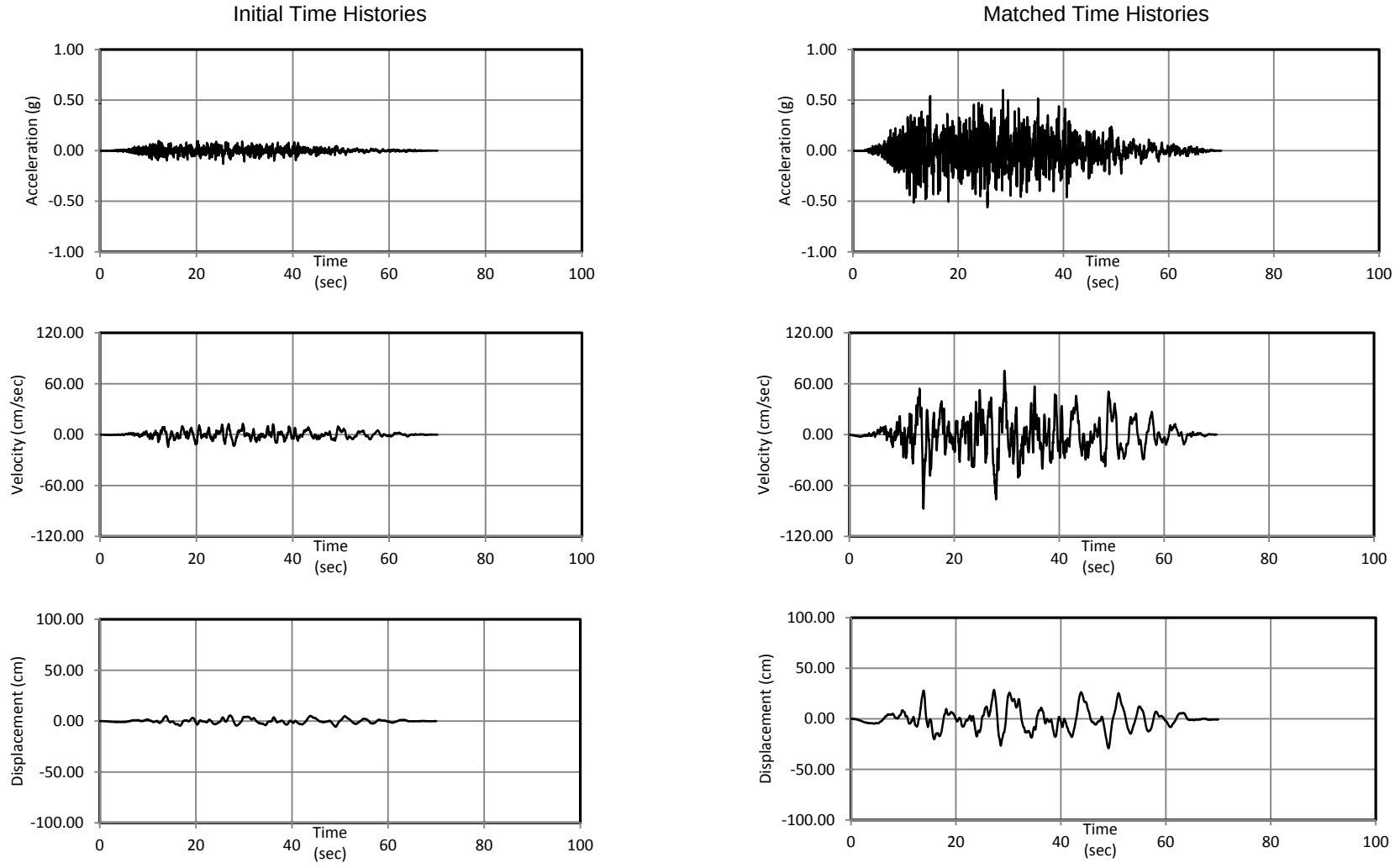
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1992 Landers (Mw = 7.28) Record: Barstow (NGA No. 838) - Fault Normal Figure 8.5a



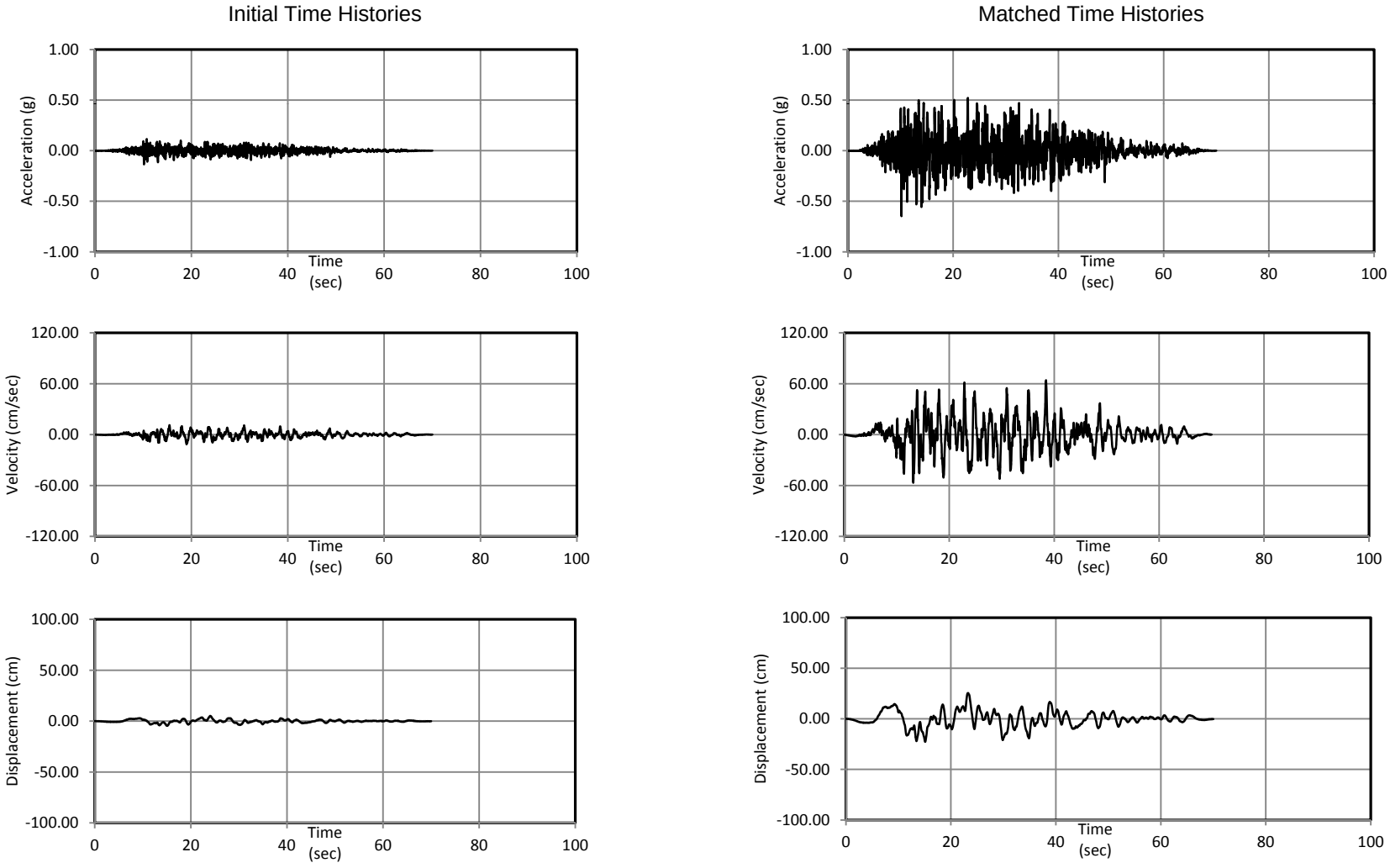
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1992 Landers (Mw = 7.28) Record: Barstow (NGA No. 838) - Fault Parallel Figure 8.5b



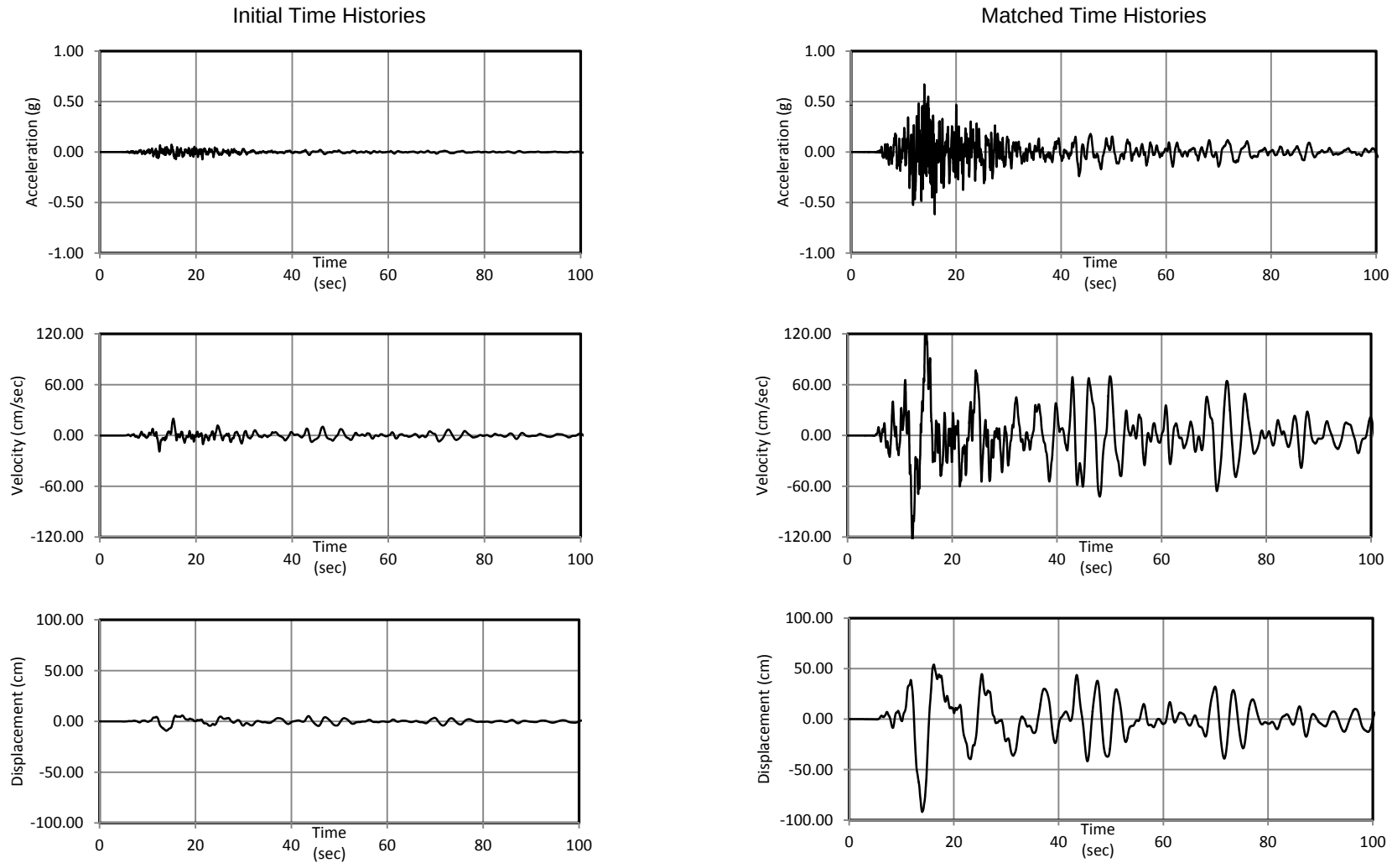
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1992 Landers (Mw = 7.28) Record: North Palm Springs (NGA No. 882) - Fault Normal Figure 8.6a



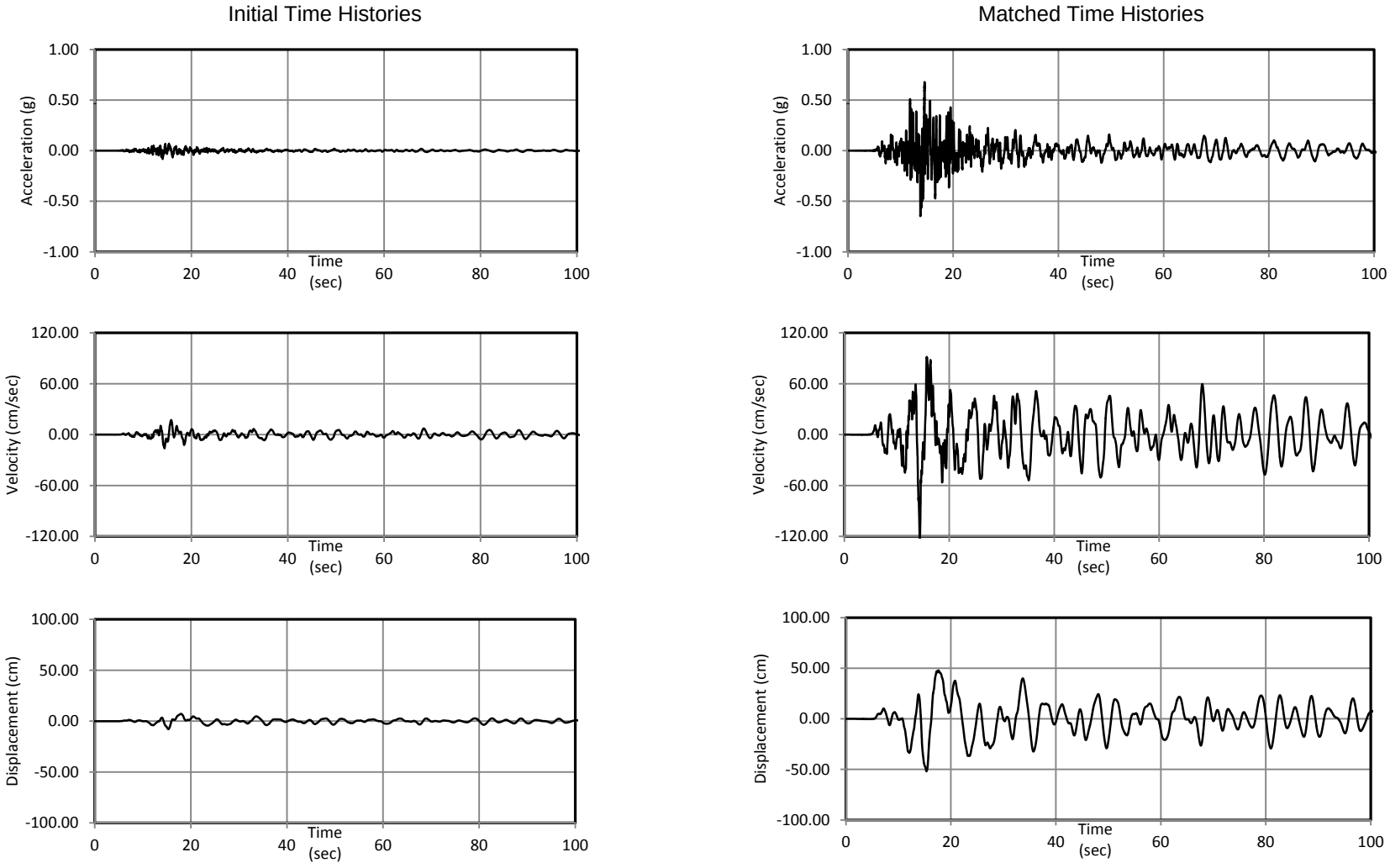
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1992 Landers (Mw = 7.28) Record: North Palm Springs (NGA No. 882) - Fault Parallel Figure 8.6b



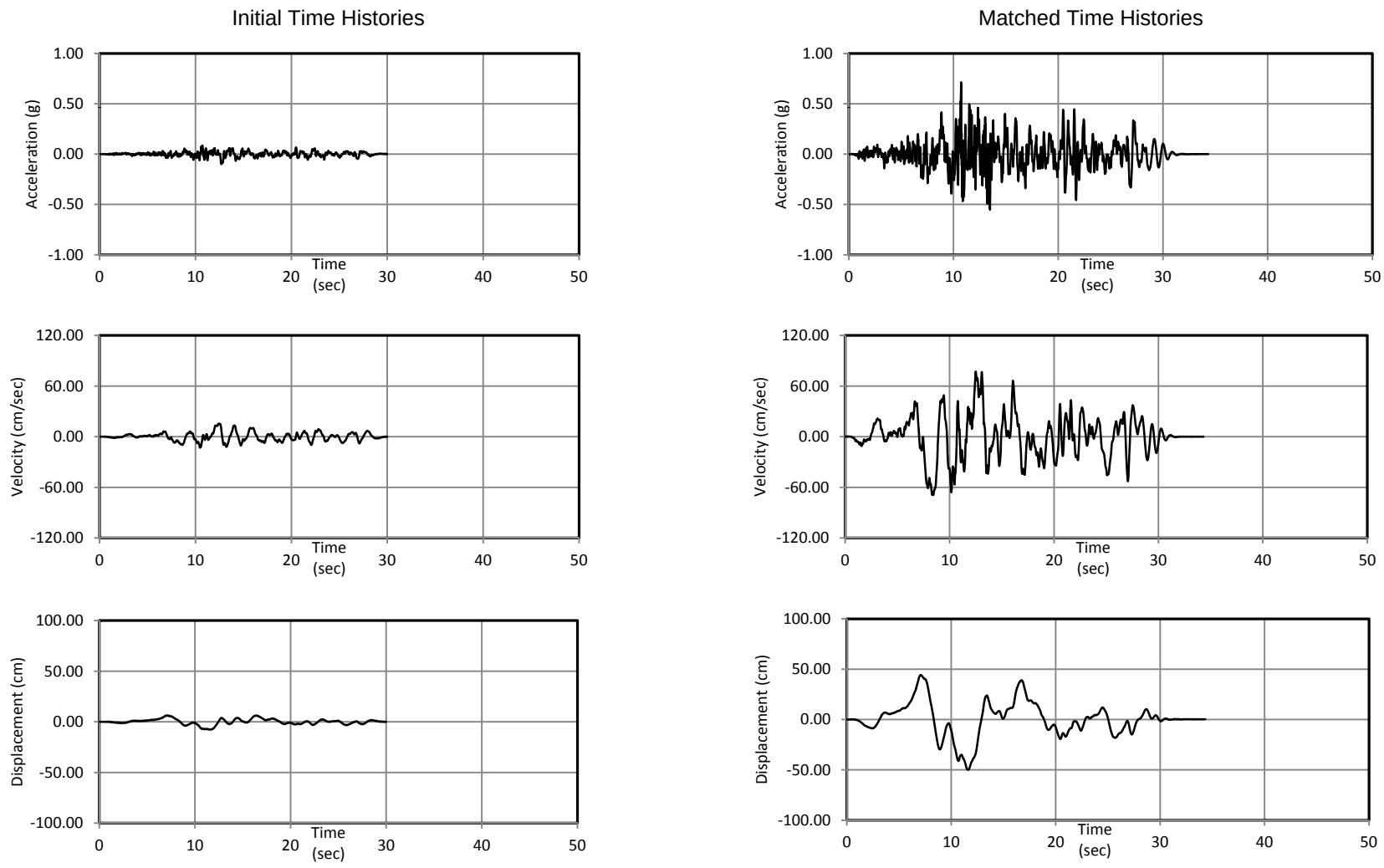
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1995 Kobe (Mw = 6.90) Record: OSAJ (NGA No. 1113) - Fault Normal Figure 8.7a



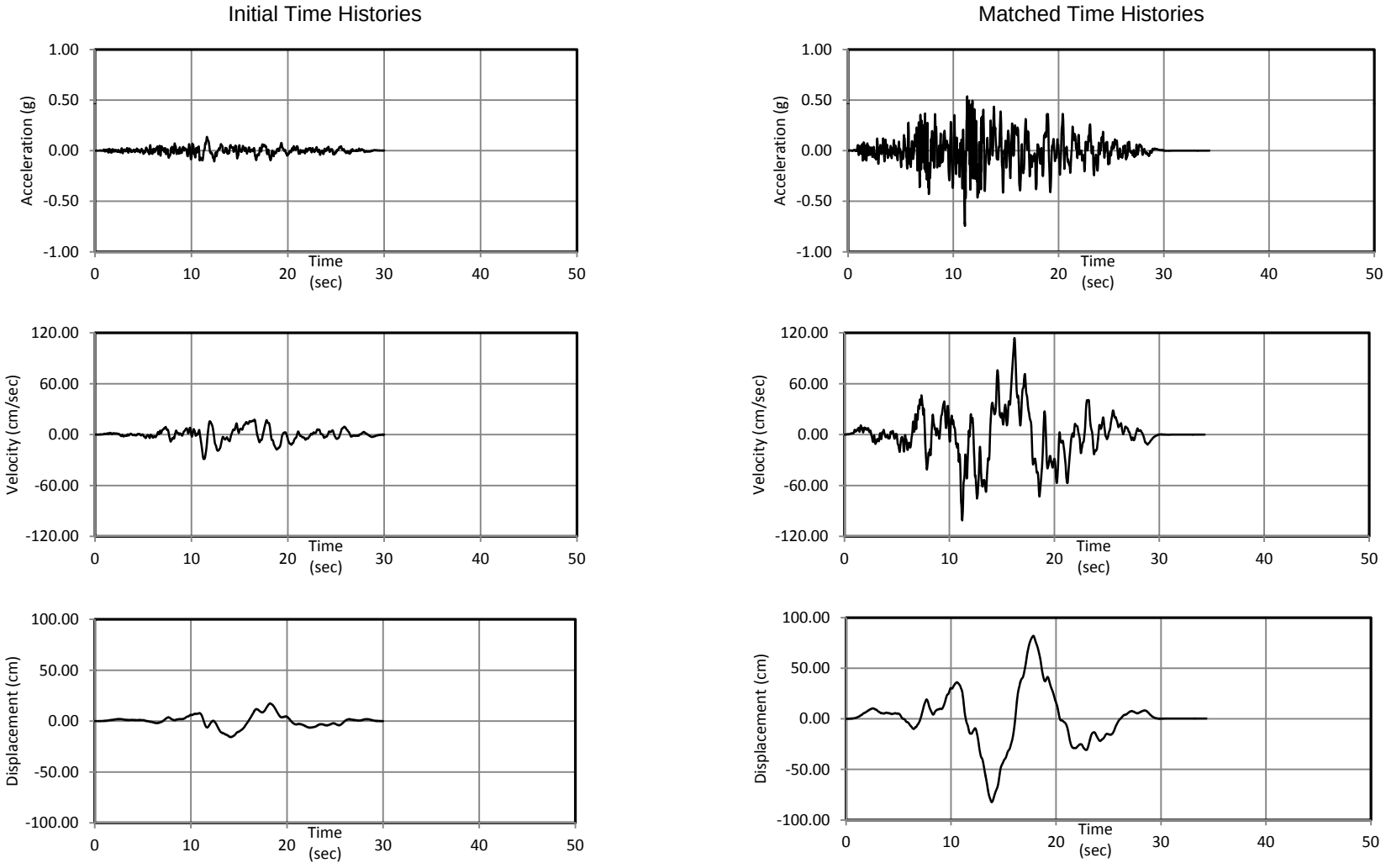
By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1995 Kobe (Mw = 6.90) Record: OSAJ (NGA No. 1113) - Fault Parallel Figure 8.7b



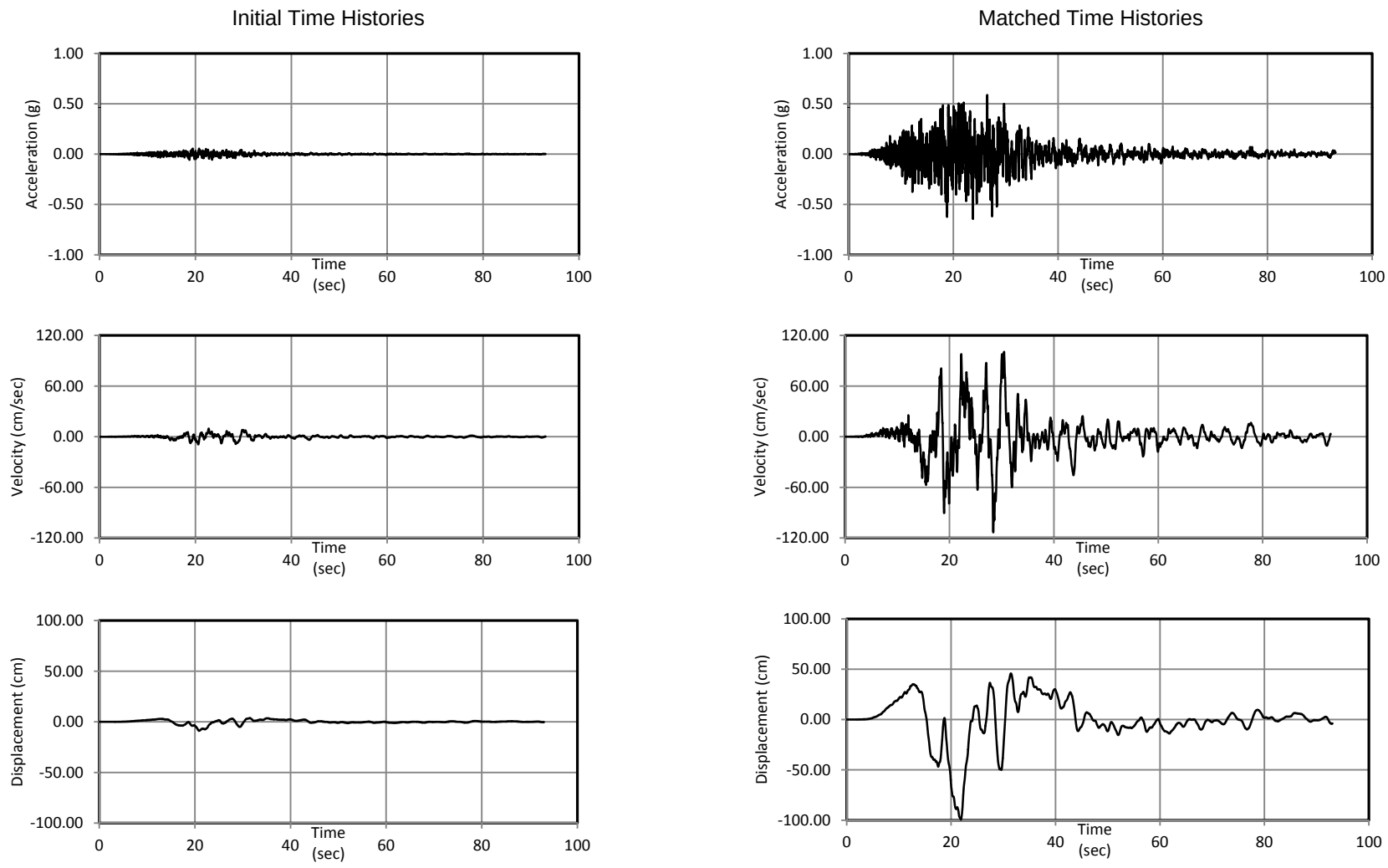
By: JF 2/13/13
Checked By: ET 2/13/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1999 Kocaeli (Mw = 7.51) Record: Iznik (NGA No. 1166) - Fault Normal Figure 8.8a



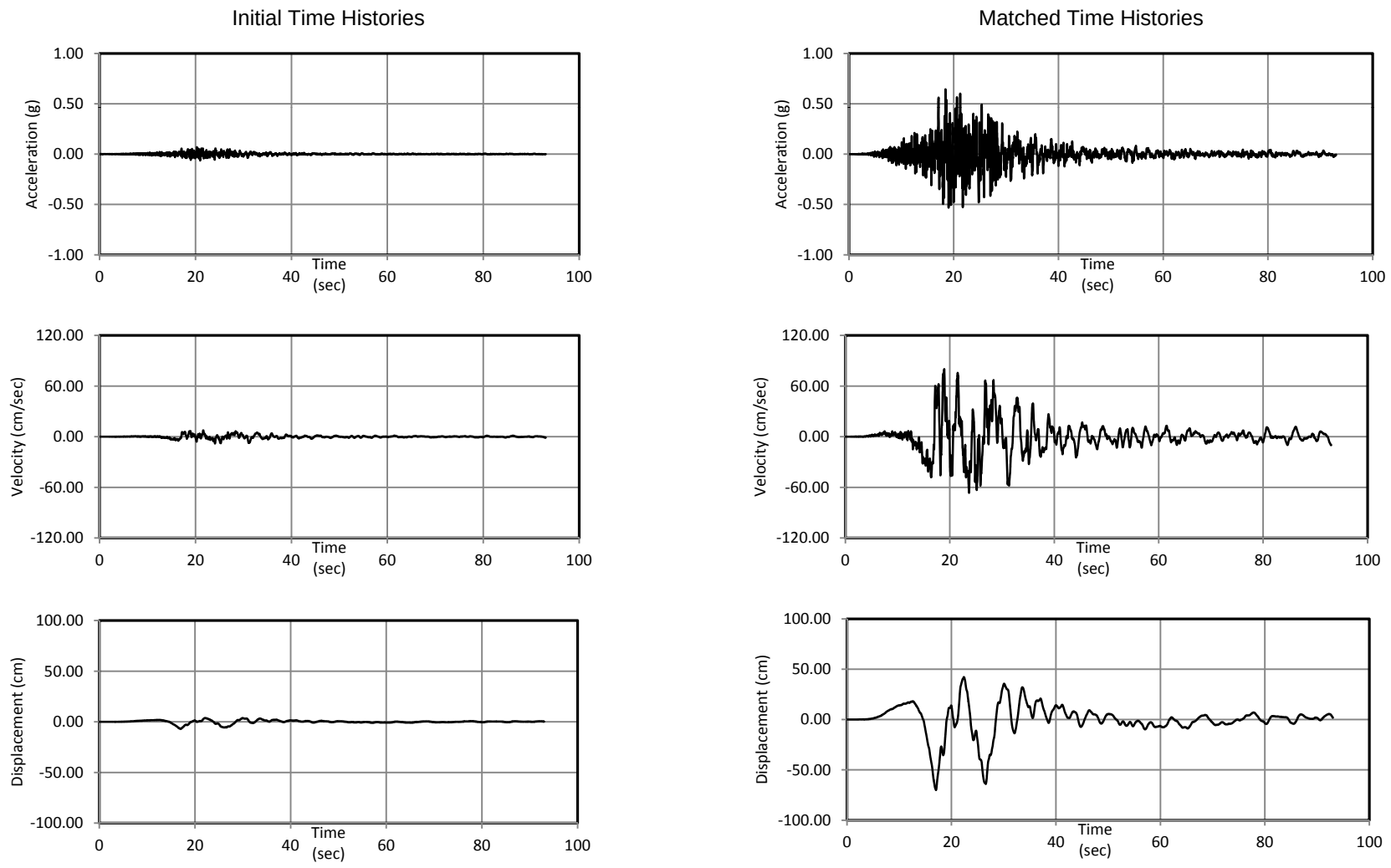
By: JF 2/13/13
Checked By: ET 2/13/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1999 Kocaeli (Mw = 7.51) Record: Iznik (NGA No. 1166) - Fault Parallel Figure 8.8b



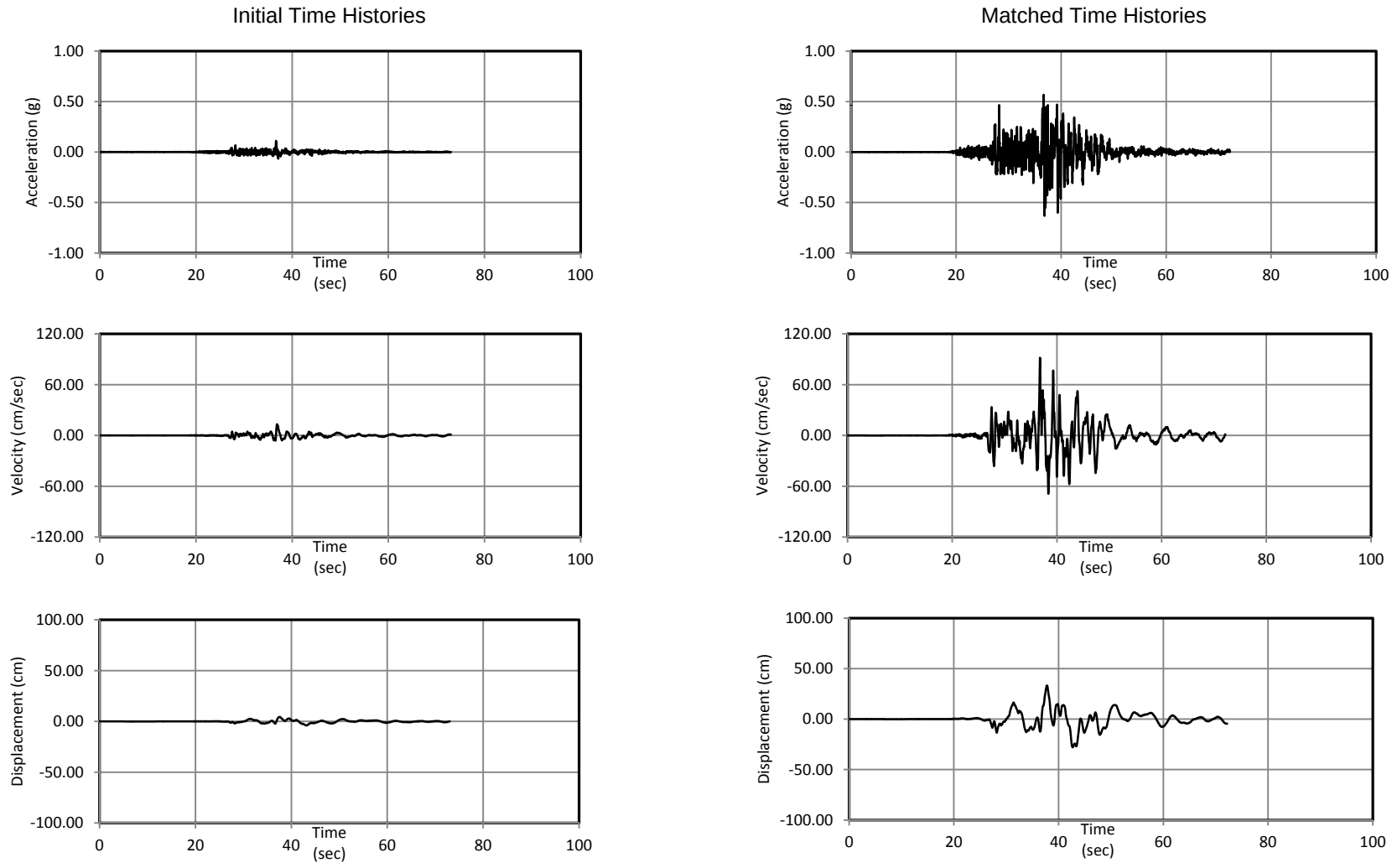
By: JF 2/13/13
Checked By: ET 2/13/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1999 Hector Mine (Mw = 7.13) Record: N Palm Springs FS#36(NGA No. 1816)-Fault Normal Figure 8.9a



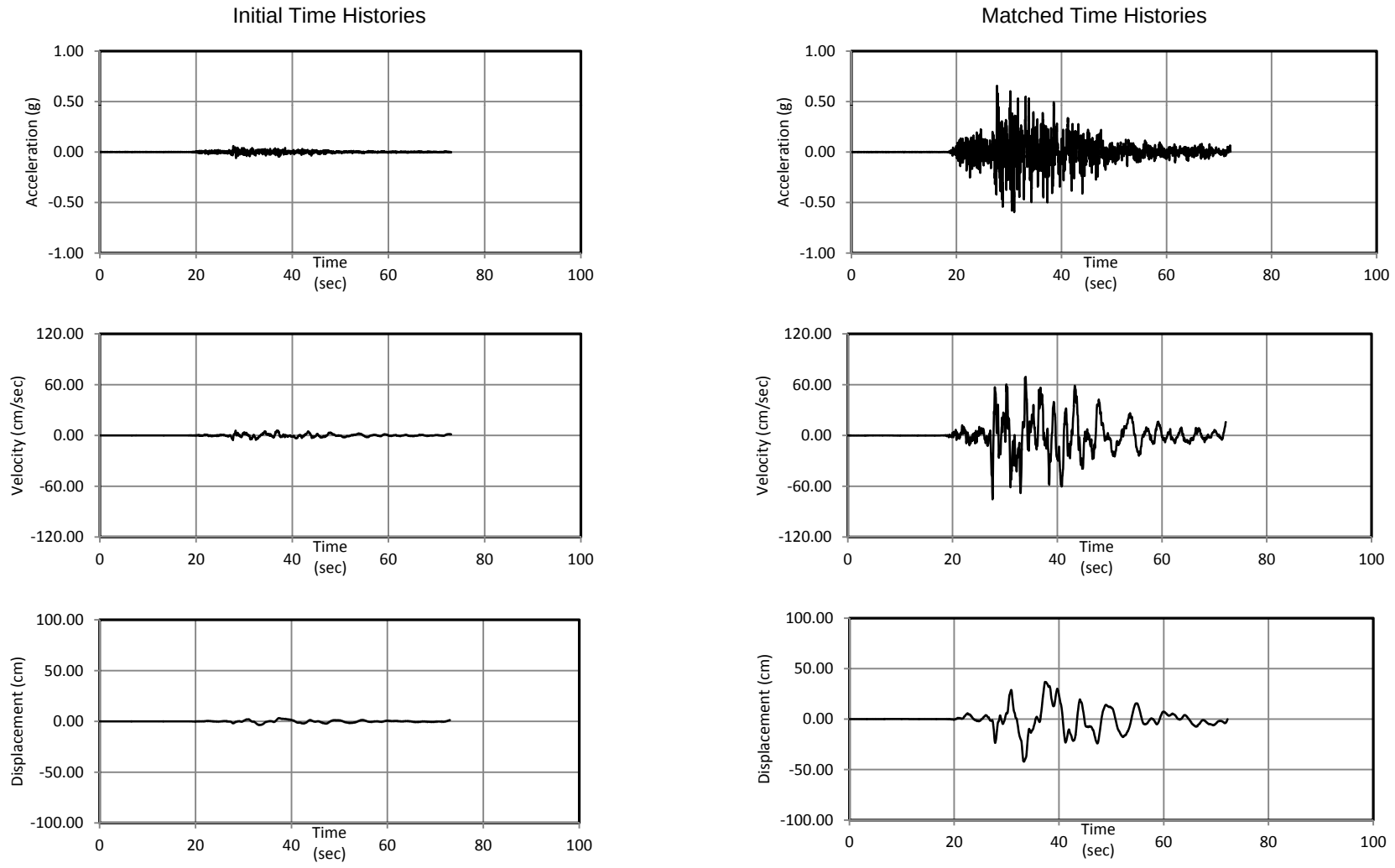
By: JF 2/13/13
Checked By: ET 2/13/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 1999 Hector Mine (Mw = 7.13) Record: N Palm Springs FS#36(NGA No.1816)-Fault Parallel Figure 8.9b



By: JF 2/13/13
Checked By: ET 2/13/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 2002 Denali (Mw = 7.90) Record: R-109 (NGA No. 2111) - Fault Normal Figure 8.10a



By: JF 2/13/13
Checked By: ET 2/13/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Time Histories for MCE Earthquake: 2002 Denali (Mw = 7.90) Record: R-109 (NGA No. 2111) - Fault Parallel Figure 8.10b

APPENDIX A

CURRENT FIELD EXPLORATIONS AND LABORATORY TEST RESULTS

APPENDIX A

CURRENT FIELD EXPLORATIONS AND LABORATORY TEST RESULTS

CURRENT FIELD EXPLORATIONS

Data were available from four pertinent borings from a previous investigation performed by our predecessor company of LeRoy Crandall & Associates (LCA) dated September 16, 1985 (LCA Job No. A-85263). The logs of the prior pertinent borings are presented in Appendix B.

To supplement the prior data, we performed two additional borings to depths of 49½ and 50 feet below the existing grade at the locations shown on Figure 2. The borings were drilled using 4⅞-inch-diameter rotary wash-type drilling equipment with drilling mud to prevent caving. The mud was removed following completion of the drilling to permit measurement of the groundwater level.

The soils encountered were logged by our field technician and undisturbed and bulk samples were obtained for laboratory inspection and testing. The logs of the borings are presented on Figures A-1.1 and A-1.2; the depths at which undisturbed samples were obtained are indicated to the left of the boring logs. The number of blows required to drive the Crandall sampler 12 inches using a 140 pound automatic hammer falling 30 inches is indicated on the logs. In addition to obtaining undisturbed samples, standard penetration tests (SPT) were performed in the borings; the results of the tests are indicated on the logs. The soils are classified in the accordance with the Unified Soil Classification System described on Figure A-2.

CURRENT LABORATORY TESTS

Laboratory tests were performed on selected samples obtained from the borings to aid in the classification of the soils and to determine their engineering properties.

The field moisture content and dry density of the soils encountered were determined by performing tests on the undisturbed samples. The results of the tests are shown to the left on the boring logs.

Tests to determine the percentage of fines (material passing through a No. 200 sieve) in selected samples were performed in accordance with ASTM D1140. The results of these tests are presented on the boring logs.

Direct shear tests were performed on selected undisturbed samples to determine the strength of the soils. The tests were performed at field moisture content and after soaking to near-saturated moisture content and at various surcharge pressures. The yield-point values determined from the direct shear tests are presented on Figure A-3, Direct Shear Test Data.

Confined consolidation tests were performed on one undisturbed sample to determine the compressibility of the soils. Water was added the sample during the test to illustrate the effect of moisture on the compressibility. The results of the tests are presented on Figure A-4, Consolidation Test Data.

In addition to the consolidation test, a test was performed by confining the sample under a normal surcharge pressure, allowing the sample to consolidate at its field moisture content, and then saturating the sample and measuring the consolidation resulting from the addition of water. The results of the tests are presented on Figure A-5, Hydroconsolidation Test Data.

Soil corrosivity tests were performed on a sample of the on-site soils. The results of the test are presented on Figure A-6.

BORING 1

DATE DRILLED: January 11, 2013
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5"
ELEVATION: 796**

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
								4" thick Asphalt Concrete over 3" thick Base Course
795							ML	SANDY SILT - medium stiff, moist, yellowish brown and olive yellow, some fine to coarse sand, some mica
			11.3	93	7			
	5							
790			24.6	92	12			
								Becomes olive brown to olive yellow, (68% passing No. 200 sieve)
	10	7						
785			4.3	104	17		SW-SM	WELL-GRADED SAND with SILT - medium dense, moist, olive yellow to yellowish brown, fine to coarse grained, some fine gravel (up to ½ inch in size), layers of Poorly Graded Sand
	15							
780		17						
			7.7	125	93/11"			Becomes very dense, some fine gravel (up to ¾ inch in size)
	20							
775		78						
			7.9	120	53/6"			
	25							
770								Cobbles (up to 8 inches in size)
		64						Becomes fine to medium grained
							SW-SM	WELL-GRADED SAND with SILT and GRAVEL - very dense, wet, olive yellow, fine to coarse grained, fine gravel (up to ¾ inch in size)
	30							
765			15.5	120	50/5"			▼
		55/6"						Increasing coarse sand and fine gravel
	35							
760								Cobble (up to 10 inches in size)
			17.3	113	66/5"			Granitic rock and cobbles (up to 6 inches in size)
	40							

Field Tech: AR
Prepared By: LH
Checked By: LT 10/5/2012

(CONTINUED ON FOLLOWING FIGURE)

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Proposed Bed Tower Expansion
Riverside Community Hospital
Riverside, California

amec

LOG OF BORING
Project: 4953-13-0001 Figure: A-1.1a

BORING 1 (Continued)

DATE DRILLED: January 11, 2013
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5"
ELEVATION: 796**

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
755		52/6"					SM — SILTY SAND - very dense, wet, light brown, fine to medium grained, granitic rock fragments
							SW — WELL-GRADED SAND with GRAVEL - very dense, wet, light brown, fine to coarse grained, some cobbles (up to 5 inches in size)
							Cobbles (up to 5 inches in size)
	45						
750			--	--	73/6"		Sample not recovered, 4-inch cobble
		50/5"					
	50						Layers of Poorly Graded Sand
745							END OF BORING AT 50 FEET
	55						
740							
	60						
735							
	65						
730							
	70						
725							
	75						
720							
	80						

NOTES:

Drilling mud used during drilling process. Mud removed after completion of drilling to a depth of 33 feet. Water level measured at a depth of 31.5 feet after removal of drilling mud and a depth of 31.4 feet 15 minutes later. Boring backfilled with a cement bentonite grout

*Number of blows to drive the Crandall sampler 12 inches using a 140 pound automatic hammer falling 30 inches.

** Elevation based on topographic survey included on Enclosure A-2.1 of the report dated 1/22/08 by C.H.J. Incorporated.

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Field Tech: AR
Prepared By: LH
Checked By: LT 10/5/2012

Proposed Bed Tower Expansion
Riverside Community Hospital
Riverside, California

amec

LOG OF BORING
Project: 4953-13-0001 Figure: A-1.1b

B12SOIL_CRANDALL(DECIMAL_ELE) L:\70131 GEOTECH\GINTW\LIBRARY AMEC JUNE2012.GLB
P:\4953 GEOTECH\2013-PROJ\130001 RIVERSIDE COMMUNITY HOSP\3.2 ALL FIELD NOTES\130001.GPJ 2/28/13

BORING 2

DATE DRILLED: January 11, 2013
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5"
ELEVATION: 794**

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
								4" thick Asphalt Concrete over 6" thick Base Course
							SM	SILTY SAND - loose, moist, yellowish brown, fine to coarse grained, trace fine gravel (up to ¼ inch in size)
790	5		19.0	104	11			
			14.7	111	21		SW	WELL-GRADED SAND - medium dense, moist, olive yellow to light brownish gray, fine to coarse grained, some gravel
785	10		19.8	103	50		SP	POORLY GRADED SAND - dense, moist, olive yellow to yellowish brown, fine to coarse grained, some fine gravel (up to ½ inch in size)
780	15	49					SP-SM	POORLY GRADED SAND with SILT - dense to very dense, moist, olive to brown, fine to medium, trace fine gravel (up to ½ inch in size)
			--	--	30/0"			Some cobbles, sample not recovered
775	20	78						Some fine to coarse gravel (up to ¾ inch in size)
			--	--	75/6"			Sample not recovered, 4-inch cobble
770	25	50/6"					SW	WELL-GRADED SAND with GRAVEL - very dense, moist, olive yellow to light brownish gray, fine to coarse grained, granitic rock fragments, fine to coarse gravel (up to 2 inches in size) Becomes olive, some silt
765			10.2	115	85			Some silty sand interbeds
760	30	85						
755	35		11.0	116	53/6"			
	40	56/6"						

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared By: LH
Checked By: LT 10/5/2012

Proposed Bed Tower Expansion
Riverside Community Hospital
Riverside, California

amec

LOG OF BORING
Project: 4953-13-0001 Figure: A-1.2a

B12SOIL_CRANDALL(DECIMAL_ELE) L:\70131 GEOTECH\GINTW\LIBRARY AMEC JUNE2012.GLB
P:\4953 GEOTECH\2013-PROJ\130001 RIVERSIDE COMMUNITY HOSP\3.2 ALL FIELD NOTES\130001.GPJ 2/28/13

BORING 2 (Continued)

DATE DRILLED: January 11, 2013
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5"
ELEVATION: 794**

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
							SW
750	45		22.4	106	63/6"		Cobbles (up to 8 inches in size)
745	50	97/9"					Less silt, more gravel, granitic rock fragments
740	55						
735	60						
730	65						
725	70						
720	75						
715	80						

END OF BORING AT 49½ FEET

NOTES:

Caving encountered below a depth of 29 feet after removal of drilling mud. Unable to measure water level. Boring backfilled with a cement bentonite grout.

Field Tech: AR
Prepared By: LH
Checked By: LT 10/5/2012

Proposed Bed Tower Expansion
Riverside Community Hospital
Riverside, California

amec

LOG OF BORING
Project: 4953-13-0001 Figure: A-1.2b

B12SOIL_CRANDALL(DECIMAL_ELE) L:\70131 GEOTECH\GINTW\LIBRARY AMEC JUNE2012.GLB
P:\4953 GEOTECH\2013-PROJ\130001 RIVERSIDE COMMUNITY HOSP\3.2 ALL FIELD NOTES\130001.GPJ 2/28/13

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravels, gravel - sand mixtures, little or no fines.
			GP	Poorly graded gravels or grave - sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel - sand - silt mixtures.
			GC	Clayey gravels, gravel - sand - clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 Sieve Size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand - silt mixtures
			SC	Clayey sands, sand - clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts and with slight plasticity.
			CL	Inorganic lays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays
TAR IMPACTED SOILS				Tar sand
				Petroliferous silt

Undisturbed Sample		Auger Cuttings	
Split Spoon Sample		Bulk Sample	
Rock Core		Crandall Sampler	
Dilatometer		Pressure Meter	
Packer		No Recovery	
Water Table at time of drilling		Water Table after drilling	

Correlation of Penetration Resistance with Relative Density and Consistency

SAND & GRAVEL		SILT & CLAY	
No. of Blows	Relative Density	No. of Blows	Consistency
0 - 4	Very Loose	0 - 1	Very Soft
5 - 10	Loose	2 - 4	Soft
11 - 30	Medium Dense	5 - 8	Medium Stiff
31 - 50	Dense	9 - 15	Stiff
Over 50	Very Dense	16 - 30	Very Stiff
		Over 30	Hard

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

SILT OR CLAY	SAND			GRAVEL		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

No.200 No.40 No.10 No.4 3/4" 3" 12"

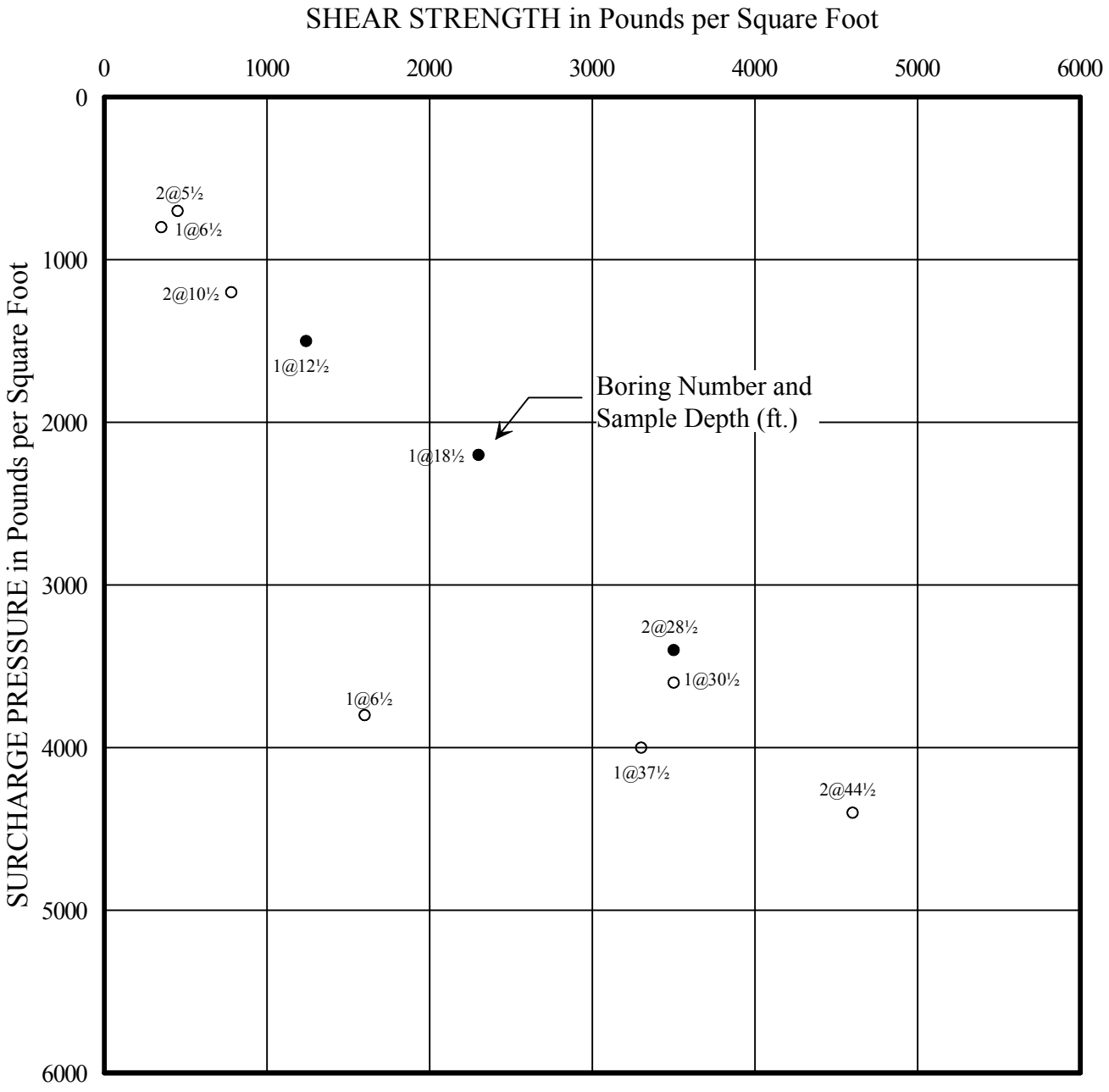
U.S. STANDARD SIEVE SIZE

Reference: The Unified Soil Classification System, Corps of Engineers, U.S. Army Technical Memorandum No. 3-357, Vol. 1, March, 1953 (Revised April, 1960)

KEY TO SYMBOLS AND DESCRIPTIONS

amec

Figure A-2



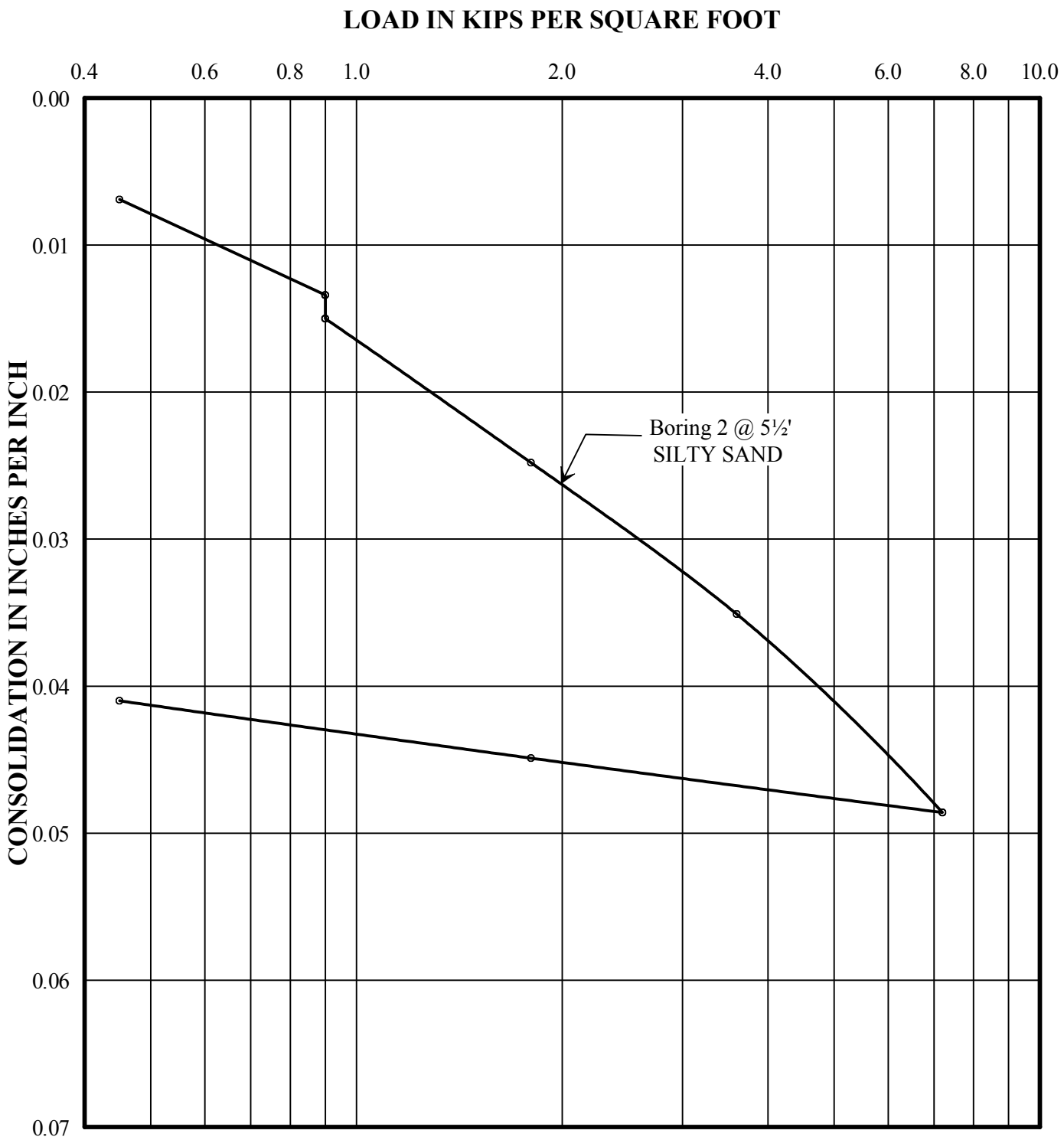
● Samples tested at field moisture content

○ Samples soaked to a moisture content near saturation

└ Natural soil

Prepared/Date: LH 2/28/13
Checked/Date: ET 2/28/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California	amec	DIRECT SHEAR TEST DATA Project No. 4953-13-0001 Figure A-3



Note: Water added to the samples after consolidation under a seating load of 0.9 kips per square foot.

TEST METHOD: ASTM Designation D2435

Prepared/Date: LH 2/28/13
Checked/Date: ET 2/28/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California	amec	CONSOLIDATION TEST DATA Project No. 4953-13-0001 Figure A-4

BORING NUMBER AND SAMPLE DEPTH:	Boring 1 at 3½'
SOIL TYPE:	SANDY SILT
SURCHARGE PRESSURE: (lbs./sq.ft.)	900
PERCENT HYDROCONSOLIDATION: (%)	0.4

Prepared/Date: LH 1/22/13
Checked/Date: JF 1/23/13

Table 1 - Laboratory Tests on Soil Samples

AMEC
Riverside Community Hospital
Your #4953130001, HDR\Schiff #13-0036LAB
16-Jan-13

Sample ID			B-1 @ 6.5' SM
Resistivity		**Units**	
as-received		ohm-cm	3,000
saturated		ohm-cm	1,320
pH			7.8
Electrical Conductivity		mS/cm	0.24
Chemical Analyses			
Cations			
calcium	Ca^{2+}	mg/kg	44
magnesium	Mg^{2+}	mg/kg	6.7
sodium	Na^{1+}	mg/kg	241
potassium	K^{1+}	mg/kg	6.2
Anions			
carbonate	CO_3^{2-}	mg/kg	9.0
bicarbonate	HCO_3^{1-}	mg/kg	224
fluoride	F^{1-}	mg/kg	ND
chloride	Cl^{1-}	mg/kg	93
sulfate	SO_4^{2-}	mg/kg	54
phosphate	PO_4^{3-}	mg/kg	6.0
Other Tests			
ammonium	NH_4^{1+}	mg/kg	ND
nitrate	NO_3^{1-}	mg/kg	161
sulfide	S^{2-}	qual	na
Redox		mV	na

Electrical conductivity in millisiemens/cm and chemical analysis were made on a 1:5 soil-to-water extract.
mg/kg = milligrams per kilogram (parts per million) of dry soil.
Redox = oxidation-reduction potential in millivolts
ND = not detected
na = not analyzed

Figure A-6

APPENDIX B

PRIOR FIELD EXPLORATIONS AND LABORATORY TEST RESULTS

BORING 1

DATE DRILLED: August 7, 1985

EQUIPMENT USED: 5"-Diameter Rotary Wash

ELEVATION 798.5*

ELEVATION (ft.)	DEPTH (ft.)	"N" VALUE STD. PEN. TEST	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	DRIVE ENERGY (ft.-kips/ft.)	SAMPLE LOC.
795	5		13.9	106	1	
			12.4	103	1	
790	10		14.4	111	1	
			15.6	104	2	
785	15		16.4	108	2	
			15.8	116	2	
780	20		19.8	110	4	
			14.1	121	14	
775	25		14.2	122	13	
			18.7	115	11	
770	30		12.3	128	13	
765	35		11.5	124	32	
760	40		7.8	137	53	

ML — 3" Asphaltic Paving - 3" Gravel Base
SANDY SILT - brown

*See Plate 1 for location of bench mark.

Grading Sandier, few gravel

SM — SILTY SAND - fine, with 4" to 6" layers of medium to coarse Sands and Sandy or Clayey Silts, brown

ML — CLAYEY SILT - with lenses of Sandy Silt and Clayey Sand, brown

SP — SAND - fine, some medium to coarse, brown

SM — SILTY SAND - fine, some medium to coarse, brown

SW — SAND - well graded, some Silt and gravel, grey-brown

NOTE:
Drilling mud used in drilling process; mud removed after drilling completed. Water level measured at a depth of 22½' on 8/14/85. Hole caved to 24' depth after mud removed.

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LOG OF BORING

LeROY CRANDALL AND ASSOCIATES

BORING 4

DATE DRILLED: August 5, 1985

EQUIPMENT USED: 5"-Diameter Rotary Wash

ELEVATION 794.6

ELEVATION (ft.)	DEPTH (ft.)	"N" VALUE STD. PEN. TEST	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	DRIVE ENERGY (ft.-kips/ft.)	SAMPLE LOC.		
			11.4	100	2		ML	2½" Asphaltic Paving - 3" Gravel Base SANDY SILT - light brown
790	5		8.5	105	2			
			12.7	120	3			
			12.3	115	4			Grading Sandier
785	10						SW	SAND - well graded, some fines, about 10% gravel, brown
			4.5	136	32			
								Greyish-brown
780	15		5.8	117	32			
			6.7	136	32			
775	20		10.3	122	25			
770	25		9.9	125	38			
765	30		11.3	123	42			
760	35		8.3	130	63			
755	40		15.9	110	79			
750	45							

NOTE: Drilling mud used in drilling process. Mud removed after drilling completed. Water level measured at a depth of 21' on 8/14/85. Hole caved to 26' depth after mud removed.

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LOG OF BORING

LeROY CRANDALL AND ASSOCIATES

BORING 5

DATE DRILLED: August 5, 1985

EQUIPMENT USED: 5"-Diameter Rotary Wash

ELEVATION 796.3

ELEVATION (ft.)	DEPTH (ft.)	"N" VALUE STD. PEN. TEST	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	DRIVE ENERGY (ft.-kips/ft.)	SAMPLE LOC.		
							ML SP	2½" Asphaltic Paving FILL - SILT and SAND 2" layer of asphaltic paving
795			6.4	114	2		ML	SANDY SILT - light brown
			2.7	90	4			
	5		5.8	99	6			
790			5.9	100	4			
	10		10.3	109	5			Some Clay
785							SW	SAND - well graded, trace of fines, grey
	15		4.5	121	8			Few gravel
780							SP	SAND - fine, light brown
			5.6	114	21			
	20		6.2	126	35			SAND - well graded, lenses of fine Sand and gravel, light greyish-brown
775								
	25		12.8	122	47			About 25% gravel
770								
	30		11.9	128	42			
765								
	35		15.8	113	35			
760								
	40		11.7	131	60			

NOTE: Drilling mud used in drilling process; mud removed after drilling completed. Water level measured at a depth of 23' on 8/14/85. Hole caved to 29' depth after mud removed.

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LOG OF BORING

LeROY CRANDALL AND ASSOCIATES

BORING 7

DATE DRILLED: August 1 & 5, 1985

EQUIPMENT USED: 16"-Diameter Bucket 0 to 26'
5"-Diameter Rotary Wash 0 to 40'

ELEVATION 794.2

ELEVATION (ft.)	DEPTH (ft.)	"N" VALUE STD. PEN. TEST	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	DRIVE ENERGY (ft.-kips/ft.)	SAMPLE LOC.		
			9.9	107	2		ML	2½" Asphaltic Paving SANDY SILT - brown
790	5		11.2	109	<1			
			12.0	113	<1			
			8.9	116	<1			
785	10		14.9	108	13		SM	SILTY SAND - some gravel, brown
780	15		5.8	121	14		SP	SAND - fine, trace of Clay and gravel, light brown
775	20		9.2	116	22			Coarser, light grey
770	25		9.8	128	14		SW	SAND - well graded, about 40% gravel, grey
765	30		11.0	123	42			4" to 6" layers of fine Sand
760	35		15.7	-	100			
755	40		10.4	132	90			

NOTE: BUCKET BORING: Water encountered at depth of 21'. Water measured at a depth of 21' at completion of drilling. Caving below 21' (to 2' in diameter).
ROTARY WASH BORING: Drilling mud used in drilling process.

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

JC 8-8 DATE 4-8 DR. W.P. D

LOG OF BORING

LeROY CRANDALL AND ASSOCIATES

BORING 9

DATE DRILLED: August 7, 1985

EQUIPMENT USED: 5"-Diameter Rotary Wash

ELEVATION 792.9

ELEVATION (ft.)	DEPTH (ft.)	"N" VALUE STD. PEN. TEST	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	DRIVE ENERGY (ft.-kips/ft.)	SAMPLE LOC.		
			13.0	114	2		ML	2½" Asphaltic Paving - 3" Gravel Base SANDY SILT - brown
790			16.2	106	2			
	5		17.5	108	2			
785			6.4	130	5		SW	SAND - well graded, some fines and gravel, brown
	10		12.9	116	6			
780			5.8	-	35			
	15		6.1	123	21			
775			10.5	131	42			
	20							
770								
	25		7.7	139	42			
765								
	30		11.6	123	46			
760								
	35		12.3	122	63			

NOTE: Drilling mud used in drilling process; mud removed after drilling completed. Water level measured at a depth of 20' on 8/14/85. Hole caved to 23' depth after mud removal.

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LOG OF BORING

LeROY CRANDALL AND ASSOCIATES

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amt. of fines)	GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amt. of fines)	SM	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

PARTICLE SIZE LIMITS

SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

NO. 200 NO. 40 NO. 10 NO. 4 3/4 in. 3 in. (12 in.)

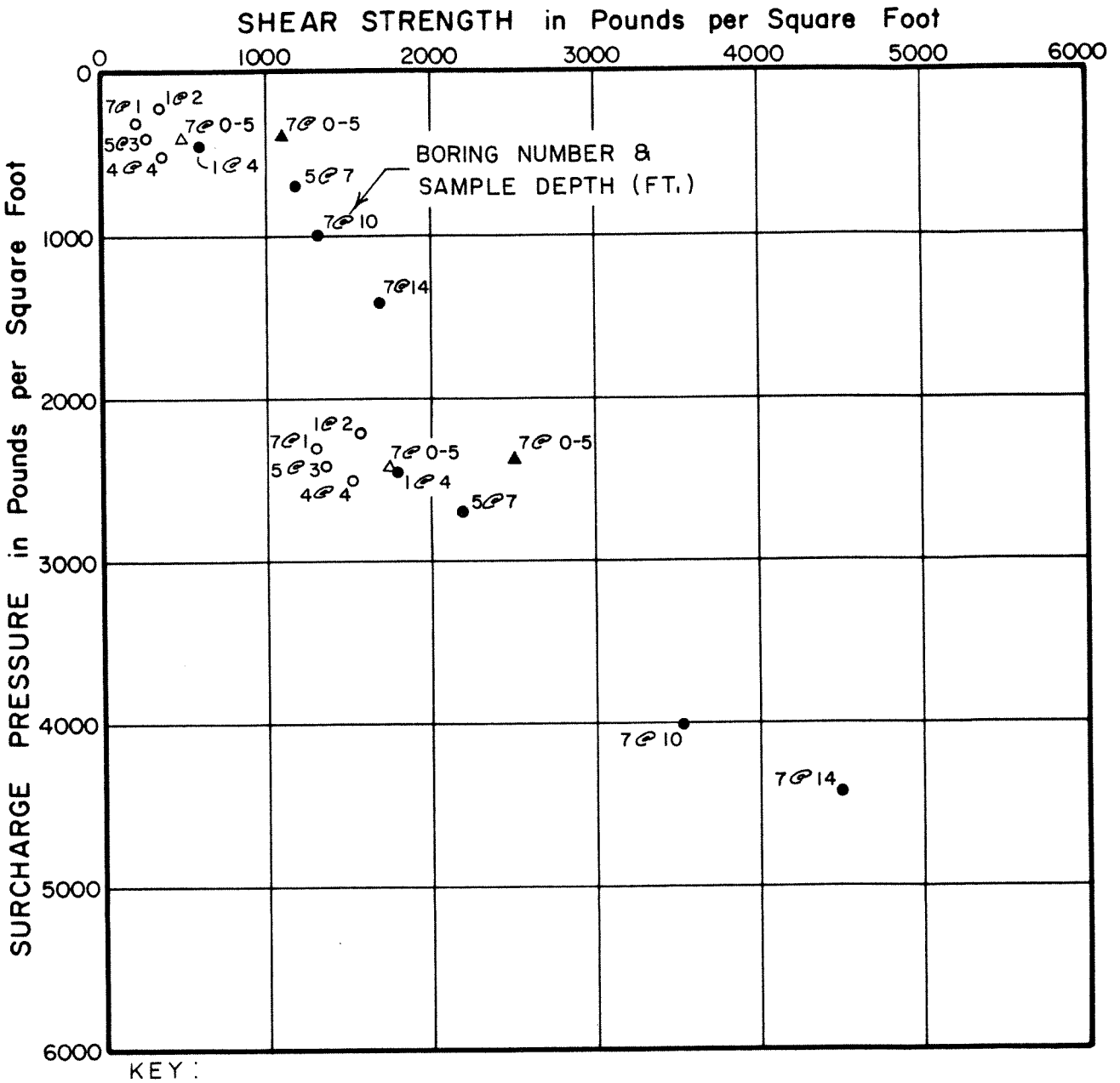
U. S. STANDARD SIEVE SIZE

UNIFIED SOIL CLASSIFICATION SYSTEM

Reference:
The Unified Soil Classification System, Corps of Engineers, U. S. Army Technical Memorandum No. 3-357, Vol. I, March, 1953. (Revised April, 1960)

LeRoy Crandall and Associates

FC 13



KEY:

▲ ● Tests at field or optimum moisture content

△ ○ Tests at increased moisture content

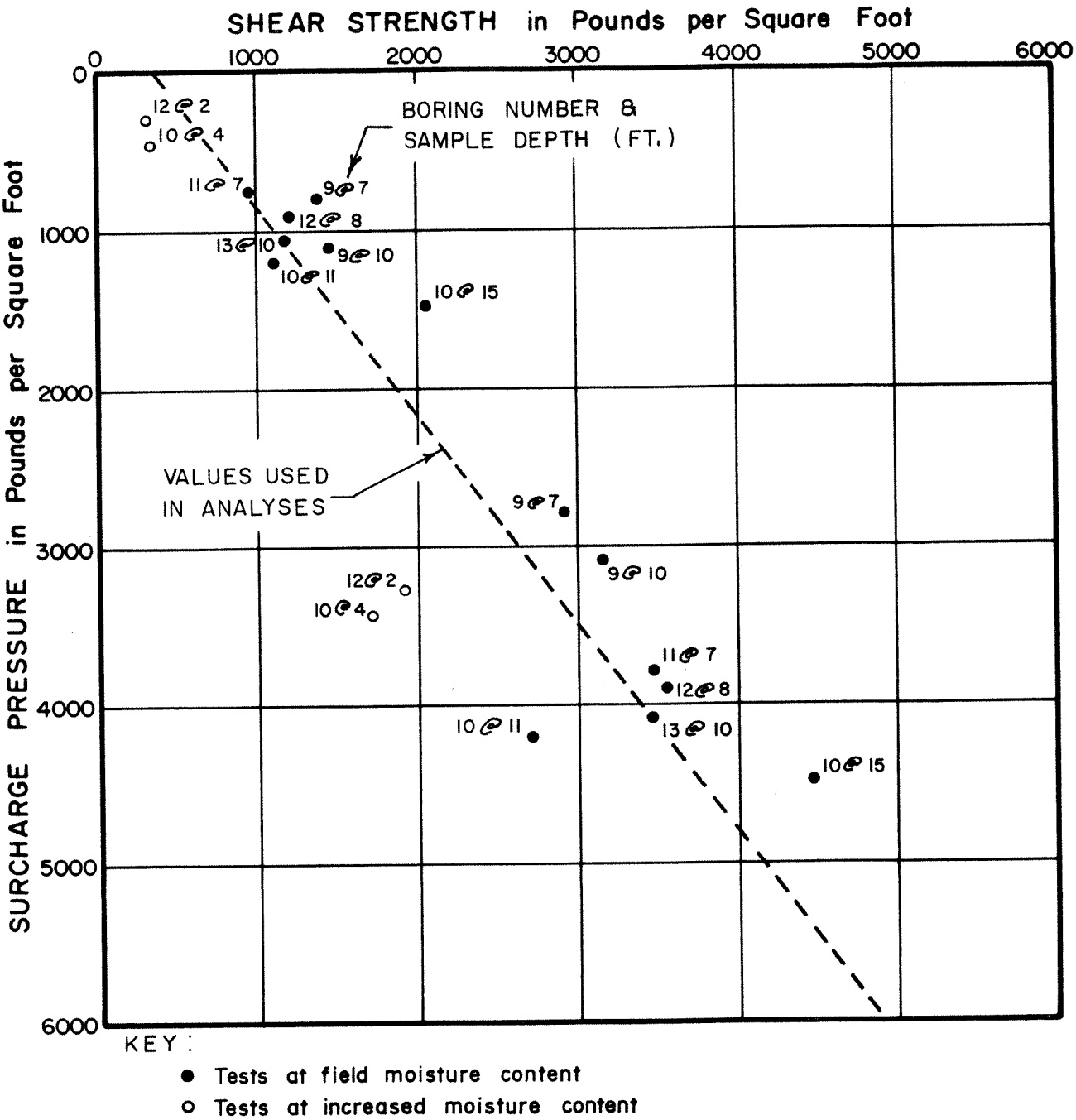
└ Undisturbed samples

└ Remolded samples compacted to 90%

DIRECT SHEAR TEST DATA

(BORINGS 1,4,5,7 – AMBULATORY CLINIC AND MRI BUILDING)

LEROY CRANDALL & ASSOCIATES

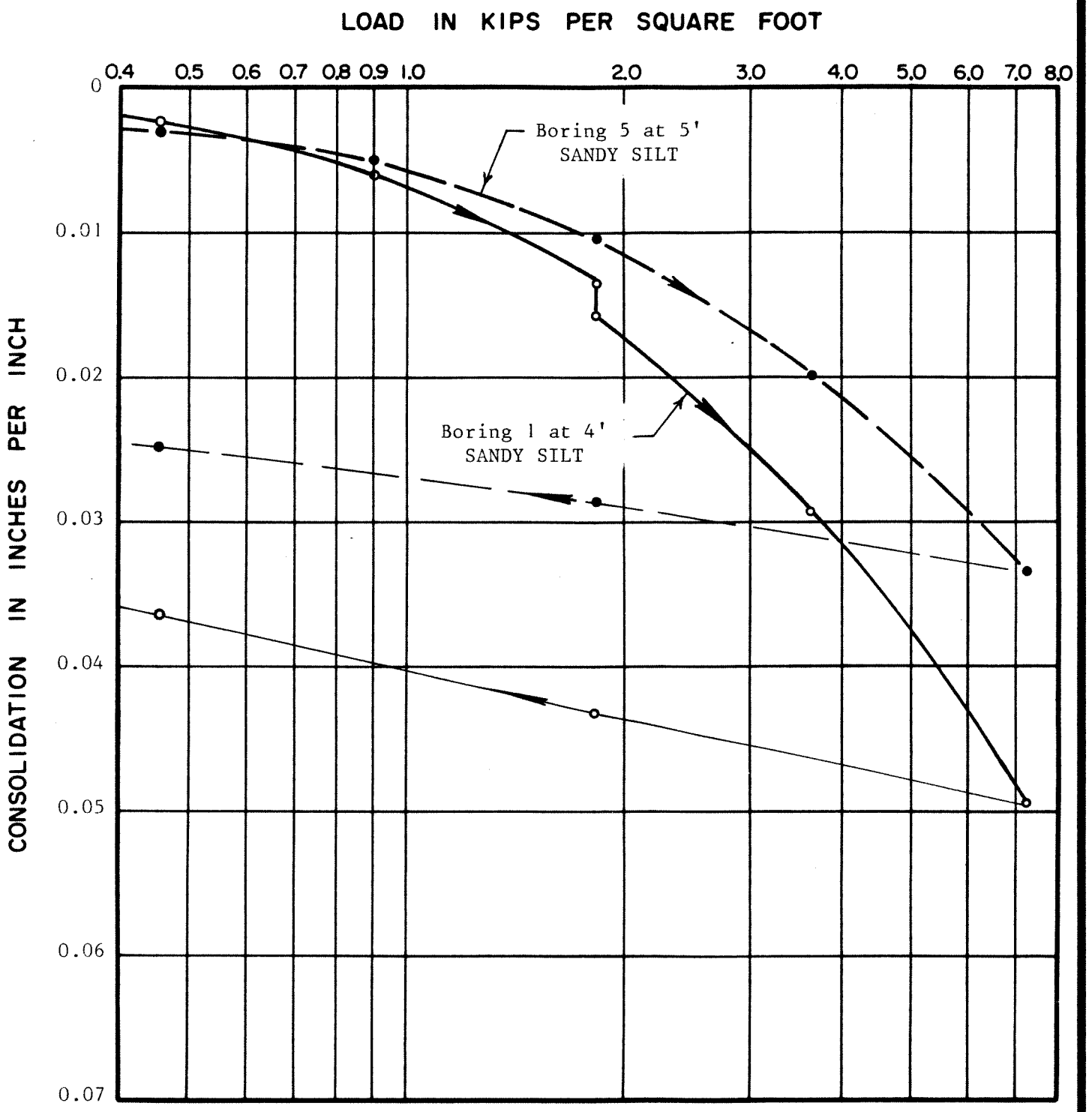


DIRECT SHEAR TEST DATA

(BORINGS 9,10,11,12,13 – PROFESSIONAL OFFICE BUILDING AND PARKING STRUCTURE)

LEROY CRANDALL & ASSOCIATES

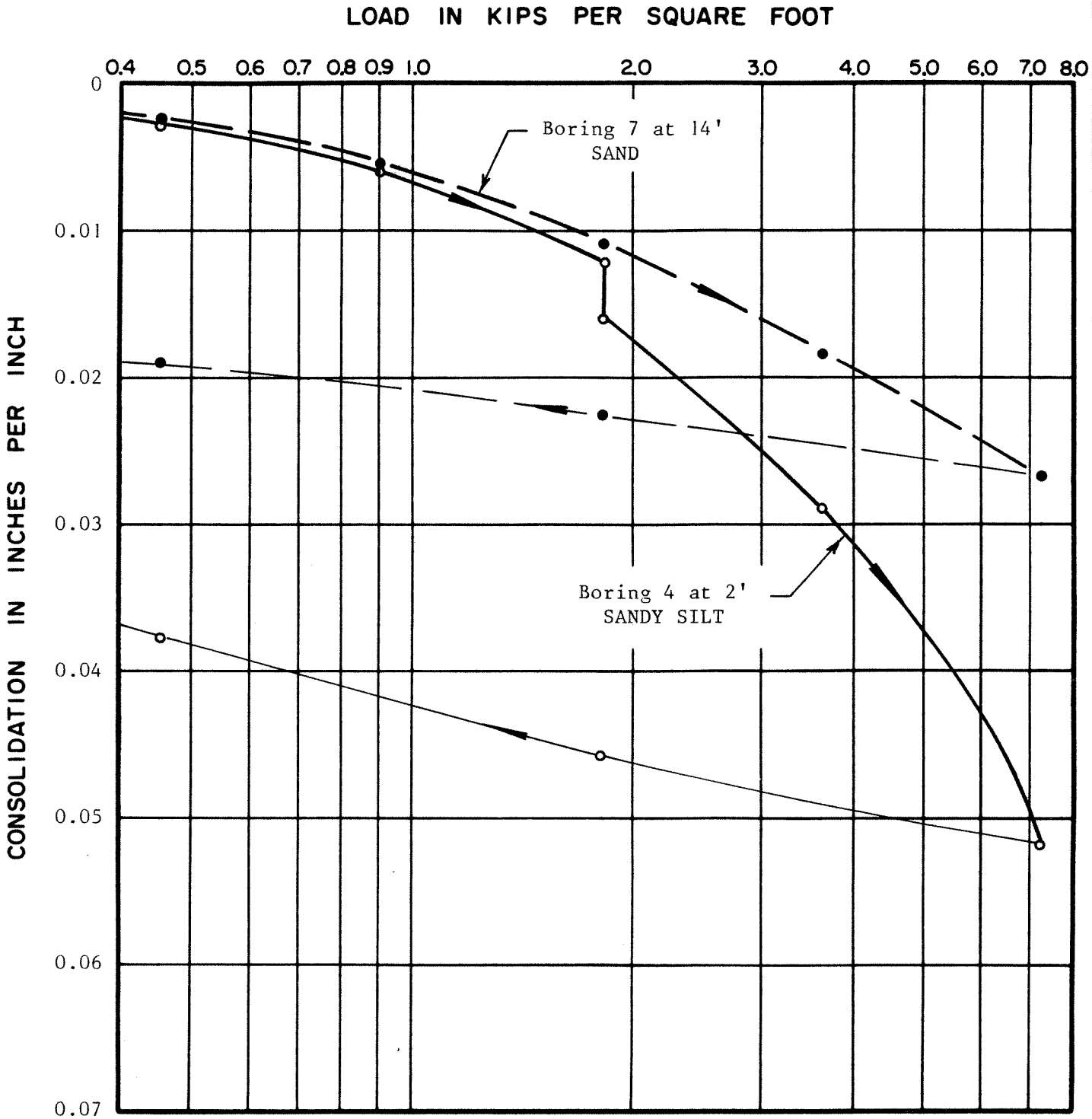
PLATE A-3.3



NOTE: Water added to sample from Boring 1 after consolidation under a load of 1.8 kips per square foot. The other sample tested at field moisture content.

CONSOLIDATION TEST DATA

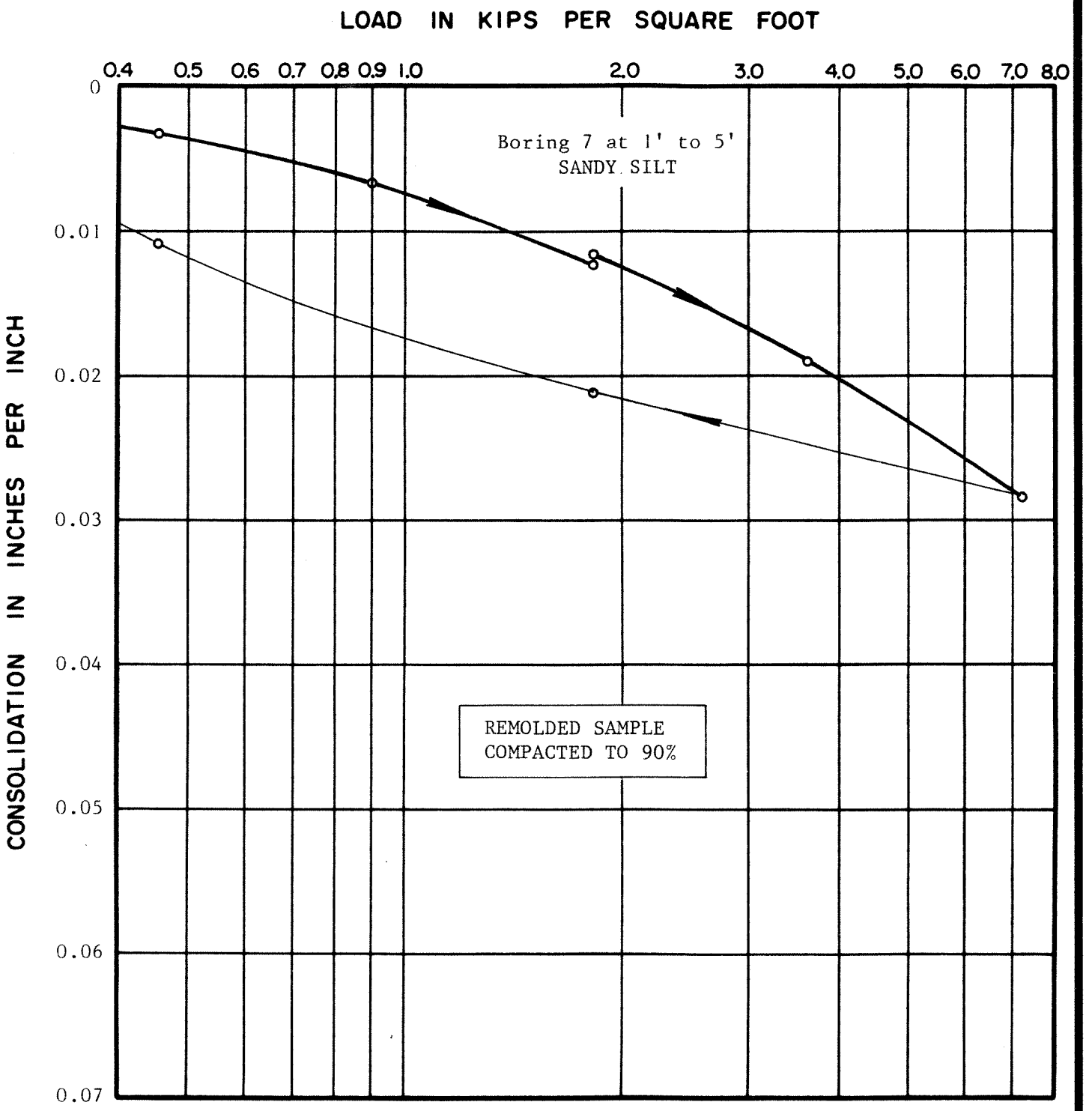
LeROY CRANDALL AND ASSOCIATES



NOTE: Water added to sample from Boring 4 after consolidation under a load of 1.8 kips per square foot. The other sample tested at field moisture content.

CONSOLIDATION TEST DATA

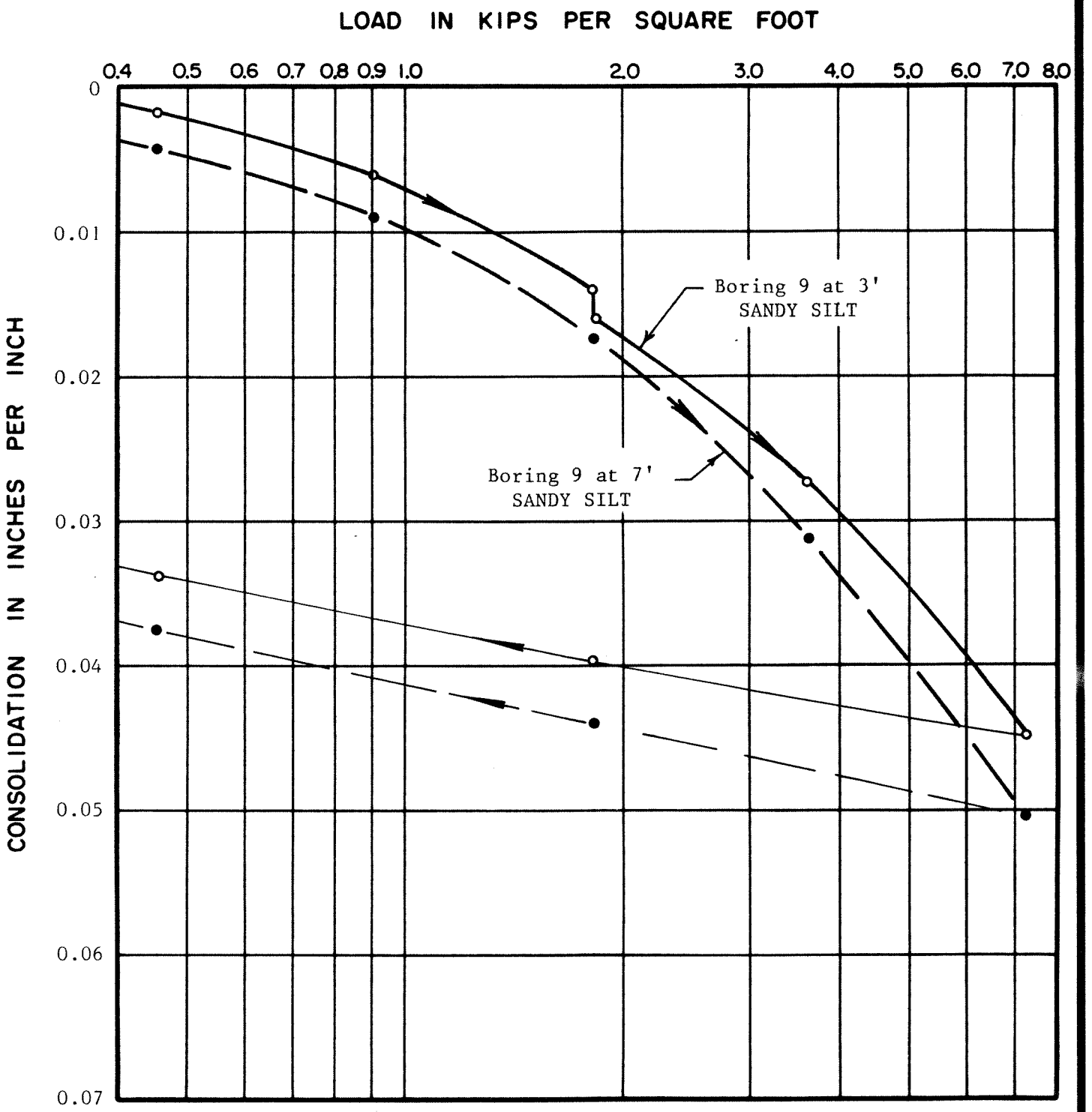
LeROY CRANDALL AND ASSOCIATES



NOTE: Water added to sample after consolidation under a load of 1.8 kips per square foot.

CONSOLIDATION TEST DATA

LeROY CRANDALL AND ASSOCIATES



NOTE: Water added to sample from 3' after consolidation under a load of 1.8 kips per square foot. The other sample tested at field moisture content.

CONSOLIDATION TEST DATA

LeROY CRANDALL AND ASSOCIATES

BORING NUMBER AND SAMPLE DEPTH:	3 at 1' to 10'	7 at 0' to 5'
SOIL TYPE:	FILL - SAND and SILT	SANDY SILT
MAXIMUM DRY DENSITY: (LBS./CU. FT.)	125	128
OPTIMUM MOISTURE CONTENT: (% OF DRY WT.)	11	10

TEST METHOD: ASTM DESIGNATION D1557-70.

COMPACTION TEST DATA

BORING NUMBER AND SAMPLE DEPTH:	7 at 0' to 5'
SOIL TYPE:	SANDY SILT
CONFINING PRESSURE: (LBS./SQ. FT.)	144
INITIAL MOISTURE CONTENT: (%)	9.0
FINAL MOISTURE CONTENT: (%)	8.7
DRY DENSITY: (LBS./CU. FT.)	115
EXPANSION INDEX:	7

TEST METHOD: UNIFORM BUILDING CODE STANDARD NO. 29-2, EXPANSION INDEX TEST.

EXPANSION INDEX TEST DATA

JOL E-3 DATE /85 DR. JP I.P. 2 of

M. J. SCHIFF & ASSOCIATES

Consulting Corrosion Engineers

1291 NORTH INDIAN HILL
CLAREMONT, CALIFORNIA 91711
(714) 626-0967

August 27, 1985

LeRoy Crandall & Associates
711 North Alvarado Street
Los Angeles, California 90026-4099

Attention: Mr. Mike Shahabi

Re: Soil Corrosivity Tests
Riverside Community Hospital
Riverside, California
Your #AE85263, MJS&A #85127

Gentlemen:

Laboratory tests have been completed on six soil samples we selected from your borings for the subject project at 4445 Magnolia Avenue. The purpose of these tests was to determine if the soils may have deleterious effects on underground utilities and concrete foundations.

The electrical resistivity of each sample was measured in its "as received" condition and again with distilled water added to create the standardized condition of saturation. The samples were chemically analyzed for the major anions and cations, and pH was measured. Results are shown on Table 1 (attached).

Electrical resistivities of soils are a measure of their resistance to the flow of corrosion currents. Corrosion currents, following Ohm's Law, tend to be lower in high resistivity soils. The electrical resistivity of a soil is determined primarily by its chemical and moisture content.

A commonly accepted correlation between electrical resistivity and corrosivity toward ferrous metals is:

below 1,000	ohm-centimeters	severely corrosive
1,000 to 2,000	" "	corrosive
2,000 to 10,000	" "	moderately corrosive
over 10,000	" "	mildly corrosive

Electrical resistivities measured in the laboratory with "as received" moisture content were in the moderately corrosive category. When saturated, the resistivities of four samples dropped into the corrosive category.

pH values varied from 7.5 to 8.4 which is mildly to moderately alkaline. This is not significant in evaluating corrosivity in this case. The chemical content of the samples was low.

We classify this site as corrosive to steel and recommend the following measures to control corrosion.

Underground steel utilities should be given a high quality protective coating such as 40 mil extruded polyethylene, 18 mil plastic tape over primer, or hot applied coal tar enamel or tape.

All underground steel should be electrically insulated from above ground steel, dissimilar metals, and cement-mortar or concrete coated steel. Underground steel pipe should be made electrically continuous if rubber gasketed, mechanical, or other nonconductive type joints are used.

Cathodic protection is recommended for underground steel utilities.

Hydraulic elevator cylinders should be well coated as described above. Each cylinder should be isolated from building metals by installing dielectric material between the piston platen and car and also in the oil line. The oil line should be placed above ground if possible but, if underground, should be protected as described above for steel utilities. Cathodic protection is recommended for hydraulic cylinders or, as an alternate, they may be placed in a plastic casing with a plastic watertight seal at the bottom.

No special precautions are required for cast or ductile iron, copper, asbestos-cement, or plastic utilities placed underground from a corrosion viewpoint. However, steel appurtenances such as bolts, joint harnesses, or flexible couplings should be coated with a coal tar or rubber based mastic after assembly.

Standard construction practices and concrete mixes may be used for concrete in contact with these soils using type 1 or 2 cement.

The scope of this study was limited to a determination of soil corrosivity and its general effects on materials likely to be used for construction. If the architect and/or engineers desire more specific information, designs, specifications, or review of design, we will be happy to work with them as a separate phase of this project.

Respectfully submitted,
M. J. SCHIFF & ASSOCIATES

Paul R. Smith

Paul R. Smith, P.E.

jr
Enclosure

Table 1 - LABORATORY TESTS ON SOIL SAMPLES

Location and Depth	Soil Type	Soil Resistivity ohm-centimeters As Rec'd	Sat'd	pH	Chemical Analysis in mg/kg (ppm) of dry soil: Calcium Ca	Magnesium Mg	Sodium Na	Bicarbonate HC03	Chloride Cl	Sulfate S04
B1 6'	silt	5,400	2,800	7.5	40	trace	69	trace	212	40
B2 4'	fill silt	4,900	1,700	8.0	80	trace	138	244	212	75
B3 17'	silt	3,700	1,200	8.4	80	24	115	244	212	140
B6 4'	fill silt	4,300	2,200	8.2	40	trace	58	trace	212	25
B7 3'	silt	2,900	1,200	7.6	40	trace	230	122	354	200
B12 2'	silt	3,600	1,000	8.0	120	24	92	122	142	450

Carbonates = 0 for all samples

Riverside Community Hospital
Riverside, California
MJS&A #85127

AMEC PRIOR PROJECT: A-85263

APPENDIX C

SPECTRUM-MATCHED TIME HISTORIES

APPENDIX C

SPECTRUM-MATCHED TIME HISTORIES

Target Spectrum

We have performed additional PSHA and DSHA using the computer program EZ-FRISK (Risk Engineering, 2011) in order to develop target response spectra to be used for spectral matching. We have using the same procedure as described in Section 6.3 of this report to obtain target response spectra for both MCE and design earthquake ground motions in conformance with ASCE 7-05. However, one major difference between the target spectra and the response spectra presented in Section 6.3 is that we have used average directivity as defined by Somerville et al. (1997) to obtain target response spectra instead of considering maximum rotated component. The target MCE and design response spectra are presented in Figures C-1 and C-2, respectively. The components of the 5% damped target MCE and design response spectra are also shown on Figures C-1 and C-2, respectively.

Period Range of Interest for Spectral Matching

The fundamental period provided by KPFF Consulting Engineers for the proposed bed tower expansion is approximately 1.5 seconds. The periods of interest considered were taken between 0.2 and 1.5 times the fundamental period in accordance with Section 1615A.1.25 of 2010 CBC. Therefore, this corresponds to a range of approximately 0.3 to 2.3 seconds.

Hazard Deaggregation

We have performed deaggregation of the probabilistic seismic hazard analyses (PSHA) for both MCE and design earthquake ground motions. The results of deaggregation are presented in Figure C-3.1 and C-3.2 for MCE and design earthquake, respectively. Based on the results of the hazard deaggregation, the governing earthquake for both MCE and design earthquake ground motions at all periods are events at distance of 13, 24, and 41 kilometers from the site with magnitudes ranging from 6.5 to 8.

Seed Time Histories

We have selected ten sets of seed time histories for spectral matching of response spectra for MCE ground motions. Two orthogonal components of the records, namely fault normal and fault parallel components were selected. The time histories were obtained from the Pacific Earthquake Engineering Research (PEER) Center, PEER Ground Motion Database (PGMD) for the shallow crustal earthquakes in active tectonic regimes.

Based on the deaggregation results of both MCE and design earthquake ground motions, the goal was to select records with a magnitude of about 6.5 to 7.5 and with distance between 10 to 60 kilometers. The records from the strike-slip fault mechanism should be considered. In addition, to capture large magnitude earthquake (greater than 7.5), one record from Denali earthquake was also selected. Furthermore, we also selected records that have similar response spectral shape as that of the target spectra. Two orthogonal components of the time histories corresponding to the fault-strike-normal and fault-strike-parallel directions were considered in the selection process for all records. In selecting the records, an attempt was made to only consider records that would need a scaling factor of five or less in matching to the target spectra.

The ten sets of selected time histories for MCE hazard levels are presented in Table 3. Also presented in the table are the earthquake magnitudes, fault mechanisms, source-to-site (Boore-Joyner – R_{jb}) distance, and site classification represented by V_{s30}.

The plots of acceleration, velocity and displacement time histories are shown on Figures 9.1a and 9.1b through 9.10a and 9.10b. The respective acceleration spectral plots are shown on Figures C-4.1a and C-4.1b through C-4.10a and C-4.10b.

Spectral Matching

We performed spectral matching for the ten sets of the selected time-histories using the computer program EZ-FRISK, Version 7.51. The spectral matching was performed in the time domain by adding wavelets of limited duration to the original time history. The intent of the spectral matching is to develop time histories that generate response spectra similar to that of the target design spectra within the periods of interest, and without

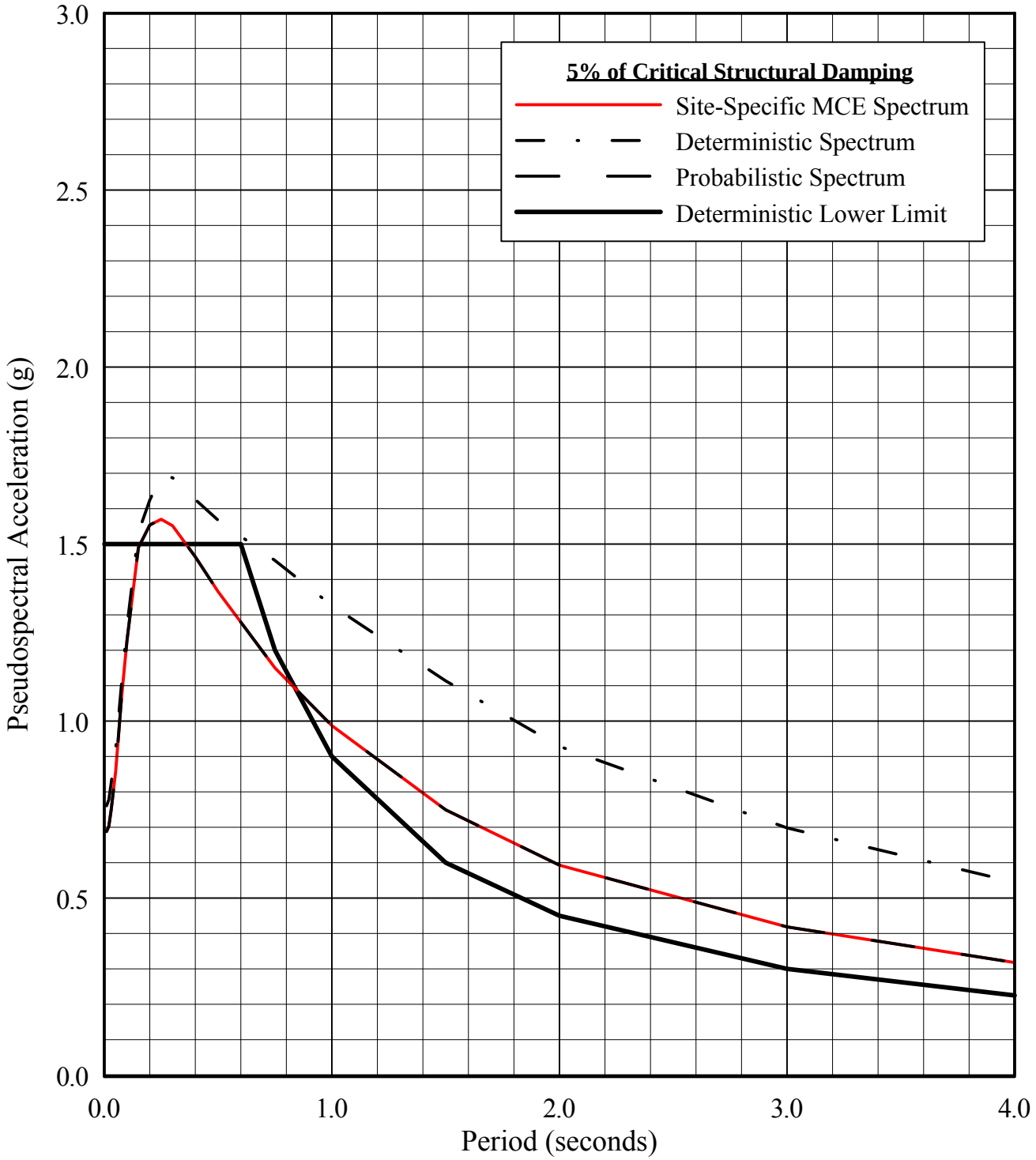
significantly changing the frequency content of the original time histories. More significance was placed on obtaining good spectral matches within the periods of interest (0.3 to 2.3 seconds) than outside this period range and in retaining wave forms and frequencies present in the original time histories.

An improved spectral matching algorithm written by Al Atik and Abrahamson (2010) was used. The new algorithm is an improvement over the widely used RspMatch algorithm developed by Abrahamson (1992) in that it has an improved tapered cosine model that prevents drift in the velocity and displacement time history by using wave functional forms that integrate to zero velocity and displacement. It is noted, however, that the new algorithm may extend the seed time histories by zero padding in the beginning and adding long period wavelets at the end of the time histories to achieve the zero drift in the time histories. The short period range of the response spectrum (up to 1 second) was matched in the first pass and then the period range of interest for spectral matching was progressively extended out to 2, and 2.5 seconds in the subsequent passes. The time step used for spectral matching was 0.005 second (200 samples per second).

The acceleration, velocity and displacement time histories for the original records and matched for the MCE response spectra are presented in Figures 9.1a and 9.1b through 9.10a and 9.10b.

Based on the results of hazard deaggregation, presented herein, the governing earthquake for both MCE and design earthquake are practically identical. Therefore, we recommend the matched time histories for design earthquake level may be computed by multiplied the matched time histories for MCE by a factor of ⅔.

2010 CBC, Section 1615A.1.25, specifies that the average of the square root of the sum of the squares (SRSS) of the matched time-histories does not fall below the corresponding ordinate of the MCE response spectra for the periods of interest; the MCE response spectrum was shown in Figure 7.1. The plots of the SRSS averages for the MCE are presented in Figure C-5.



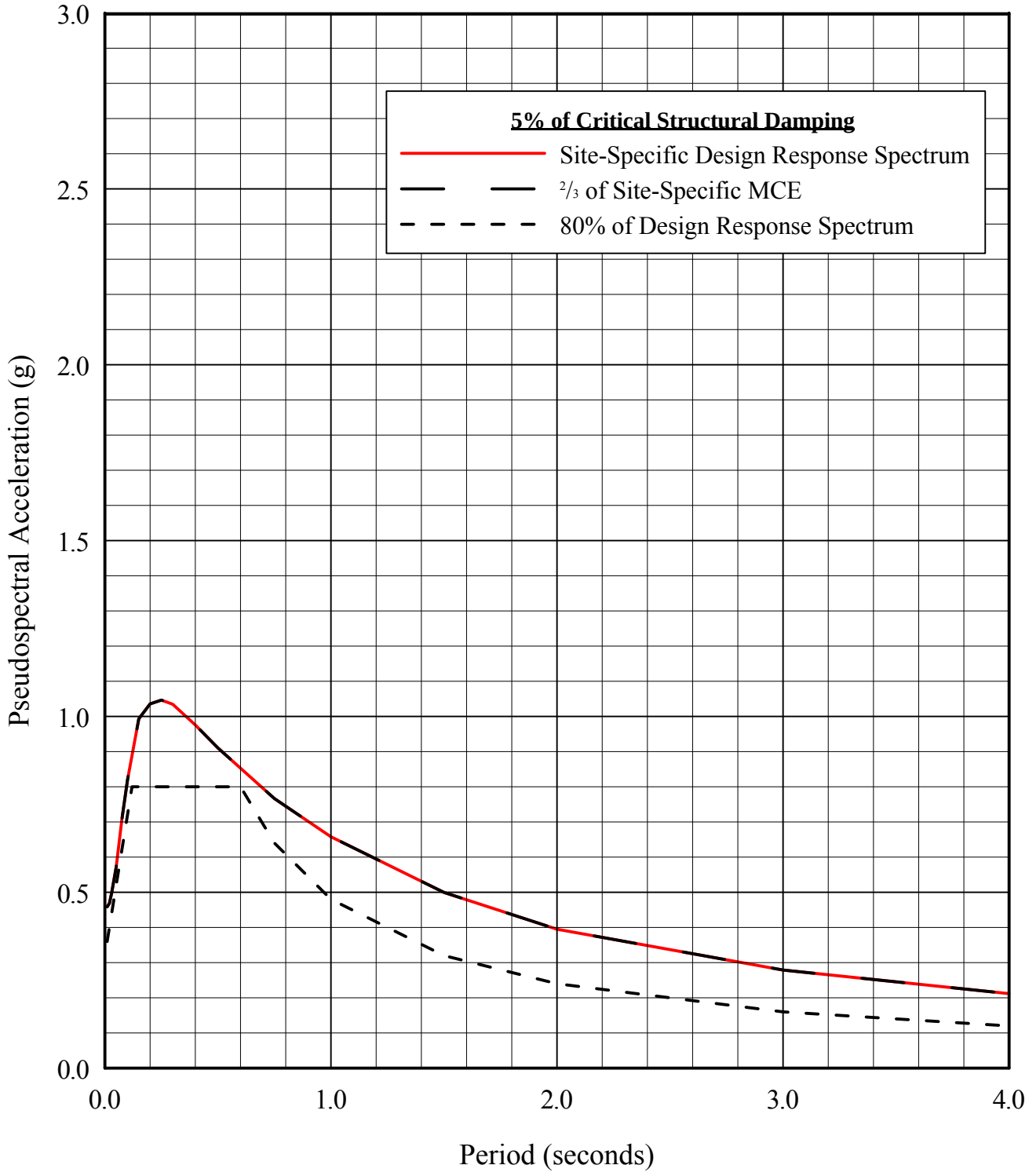
NOTES: Probabilistic spectrum was computed for a ground motion level with a 2% probability of being exceeded in 50 years.

Deterministic spectrum is governed by the deterministic events occuring on San Jacinto Fault

The response spectrum is computed using average directivity recommended by Somerville (1997).

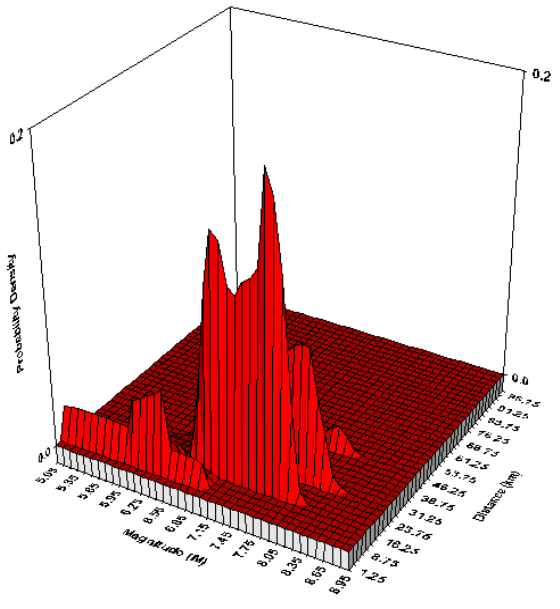
Prepared/Date: LH 1/14/13
Checked/Date: ET 1/14/13

Proposed Bed Tower Expansion Riverside Community Hospital 4445 Magnolia Avenue Riverside, California	amec	TARGET RESPONSE SPECTRA Components of the Maximum Considered Earthquake (MCE) Response Spectrum Project No. 4953-13-0001 Figure C-1

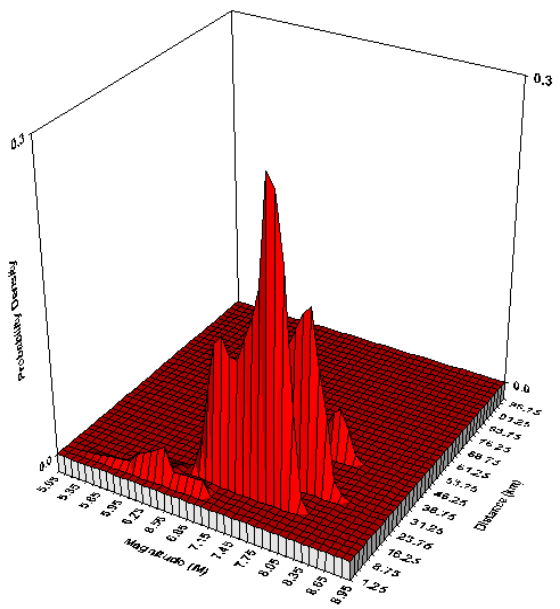


Prepared/Date: LH 1/14/13
Checked/Date: ET 1/14/13

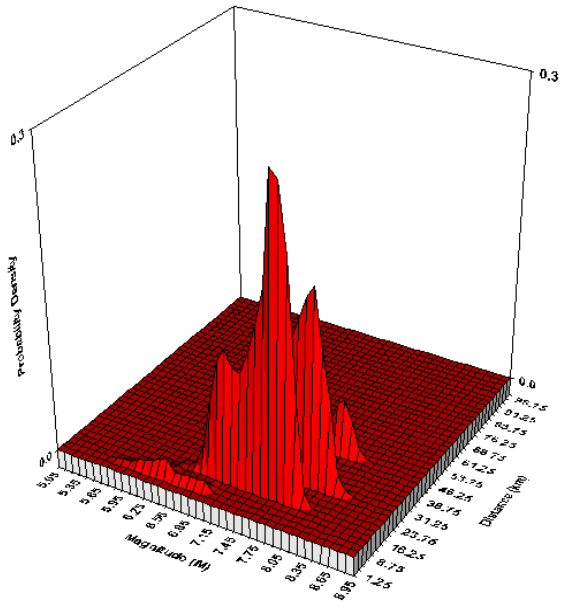
Proposed Bed Tower Expansion Riverside Community Hospital 4445 Magnolia Avenue Riverside, California	amec	TARGET RESPONSE SPECTRA Components of the Design Response Spectrum Project No. 4953-13-0001 Figure C-2



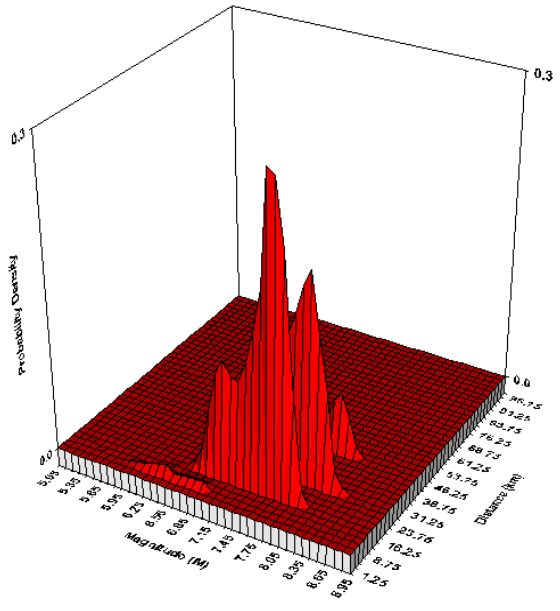
Period: 0.3
Amplitude: 1.552
Hazard: 0.000411579
Mean Magnitude: 7.05
Mean Distance: 15.67



Period: 1
Amplitude: 0.9873
Hazard: 0.000406199
Mean Magnitude: 7.46
Mean Distance: 18.13



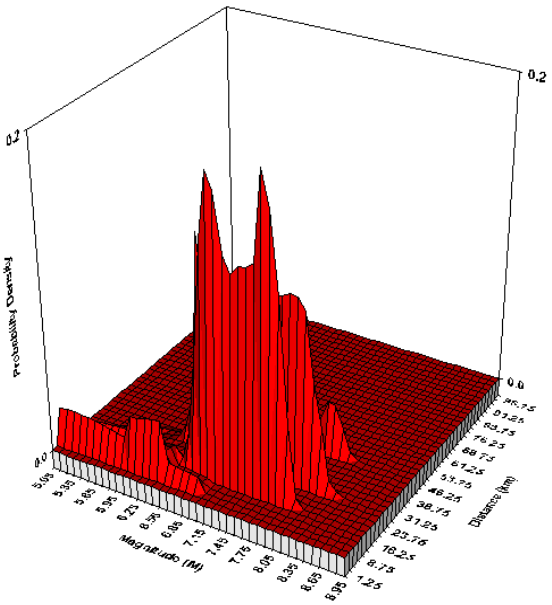
Period: 1.5
Amplitude: 0.7496
Hazard: 0.000415176
Mean Magnitude: 7.54
Mean Distance: 18.89



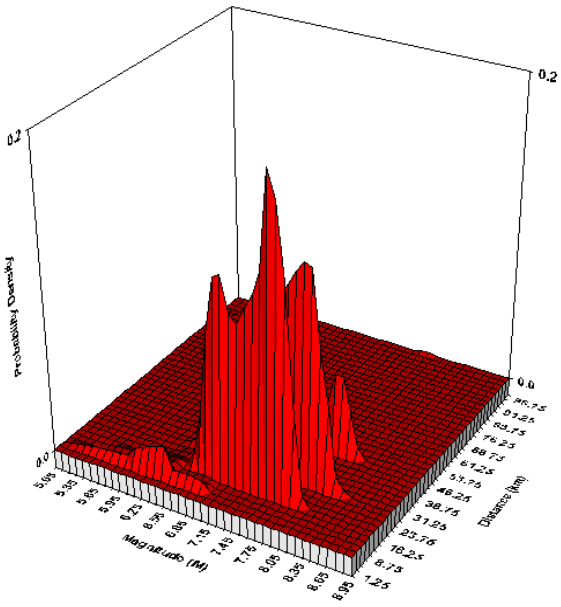
Period: 2
Amplitude: 0.593
Hazard: 0.000417592
Mean Magnitude: 7.59
Mean Distance: 19.36

Prepared/Date: LH 1/14/13
Checked/Date: ET 1/14/13

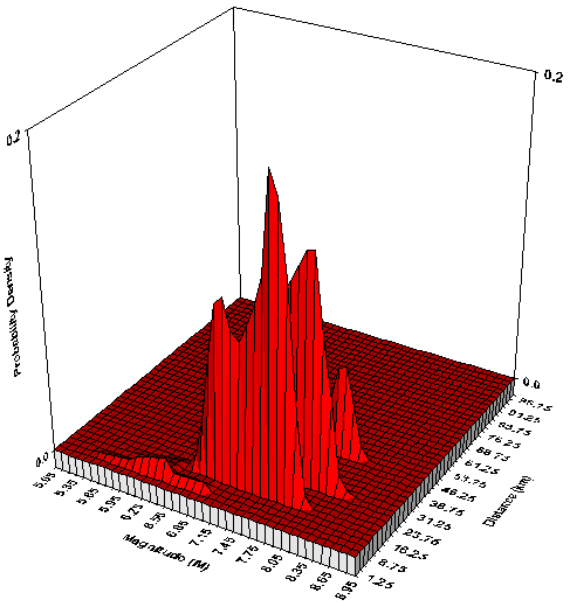
Proposed Bed Tower Expansion Riverside Community Hospital 4445 Magnolia Avenue Riverside, California	amec	DEAGGREGATION MAXIMUM CONSIDERED EARTHQUAKE (MCE) Project No. 4953-13-0001 Figure C-3.1



Period: 0.3
Amplitude: 1.035
Hazard: 0.00202129
Mean Magnitude: 7.03
Mean Distance: 18.19



Period: 1
Amplitude: 0.6582
Hazard: 0.00165209
Mean Magnitude: 7.40
Mean Distance: 19.89



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Hazard: 0.0015795
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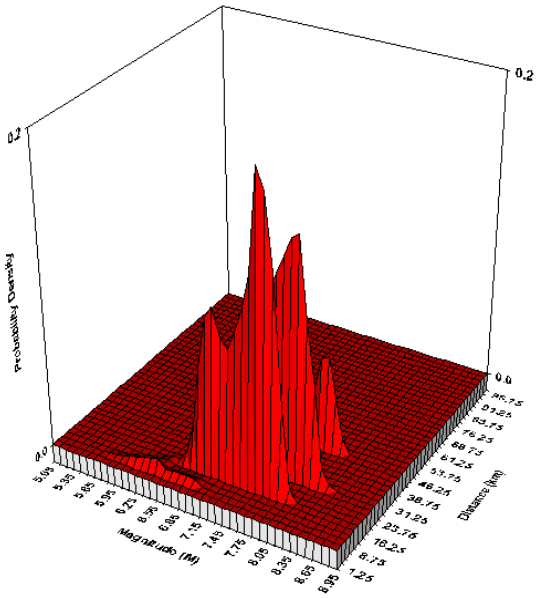
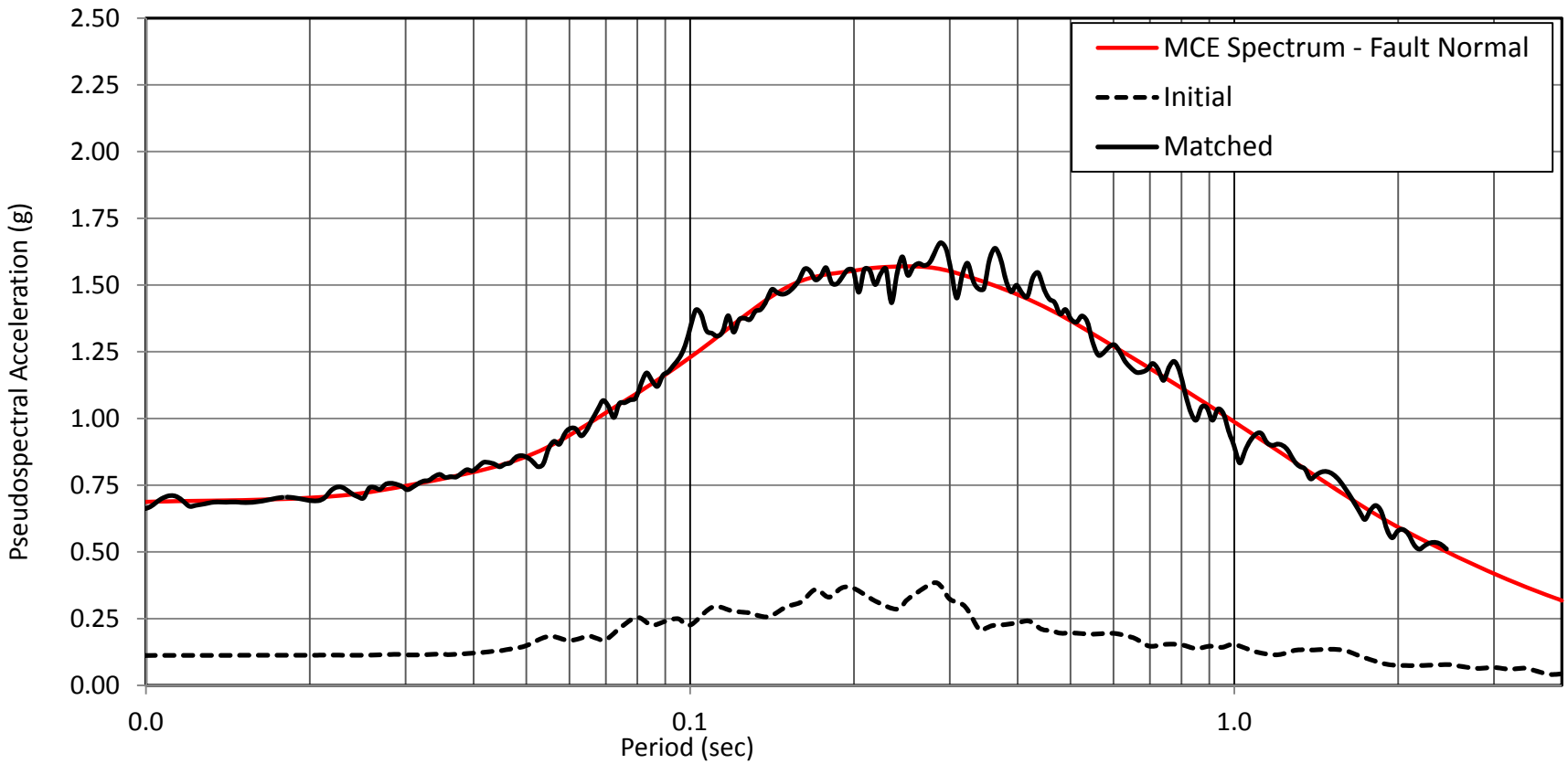
Mean Distance: 20.38



Period: 2
Amplitude: 0.3953
Hazard: 0.00152008
Mean Magnitude: 7.53
Mean Distance: 20.72

Prepared/Date: LH 1/14/13
Checked/Date: ET 1/14/13

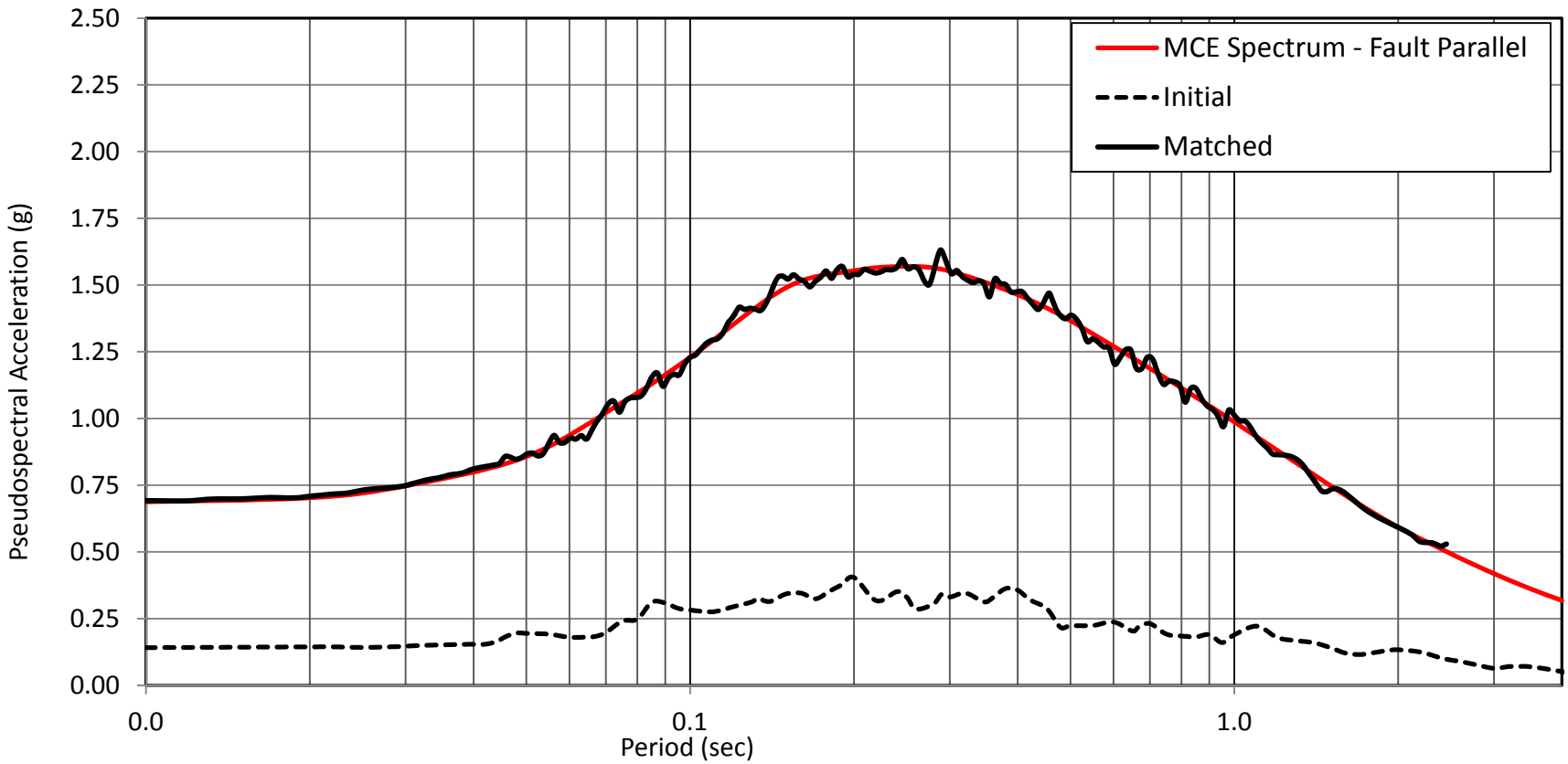
Proposed Bed Tower Expansion Riverside Community Hospital 4445 Magnolia Avenue Riverside, California	amec	DEAGGREGATION DESIGN EARTHQUAKE Project No. 4953-13-0001 Figure C-3.2



Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1979 Imperial Valley (Mw = 6.53) Record: El Centro Array #12 (NGA No. 175) - Fault Normal Figure C-4.1a



Notes:
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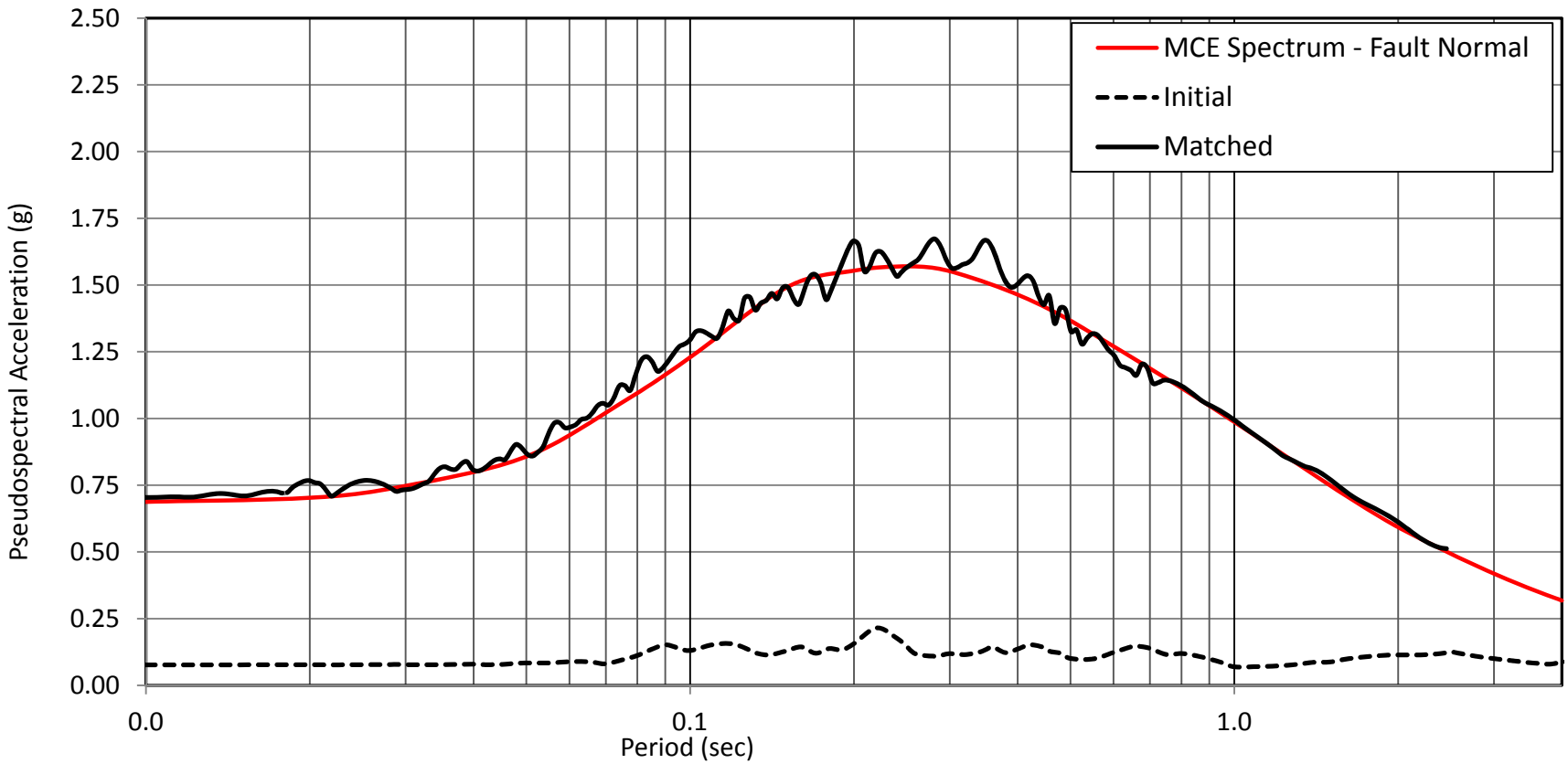
By: JF 2/12/13
Checked By: ET 2/12/13

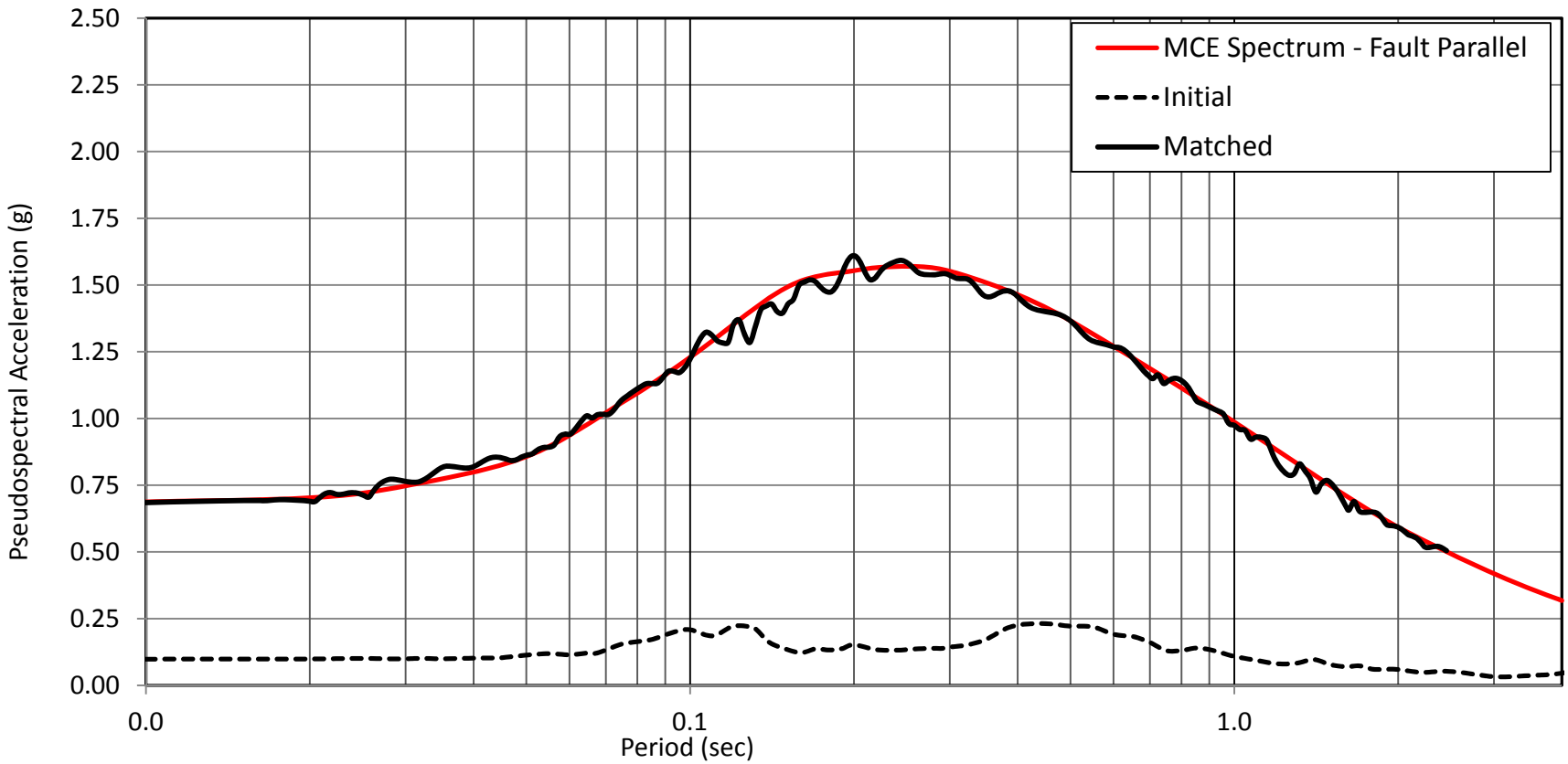
Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1979 Imperial Valley (Mw = 6.53) Record: El Centro Array #12 (NGA No. 175) - Fault Parallel Figure C-4.1b



Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1979 Imperial Valley (Mw = 6.53) Record: Westmorland Fire Sta.(NGA No. 192)-Fault Normal Figure C-4.2a



Notes:
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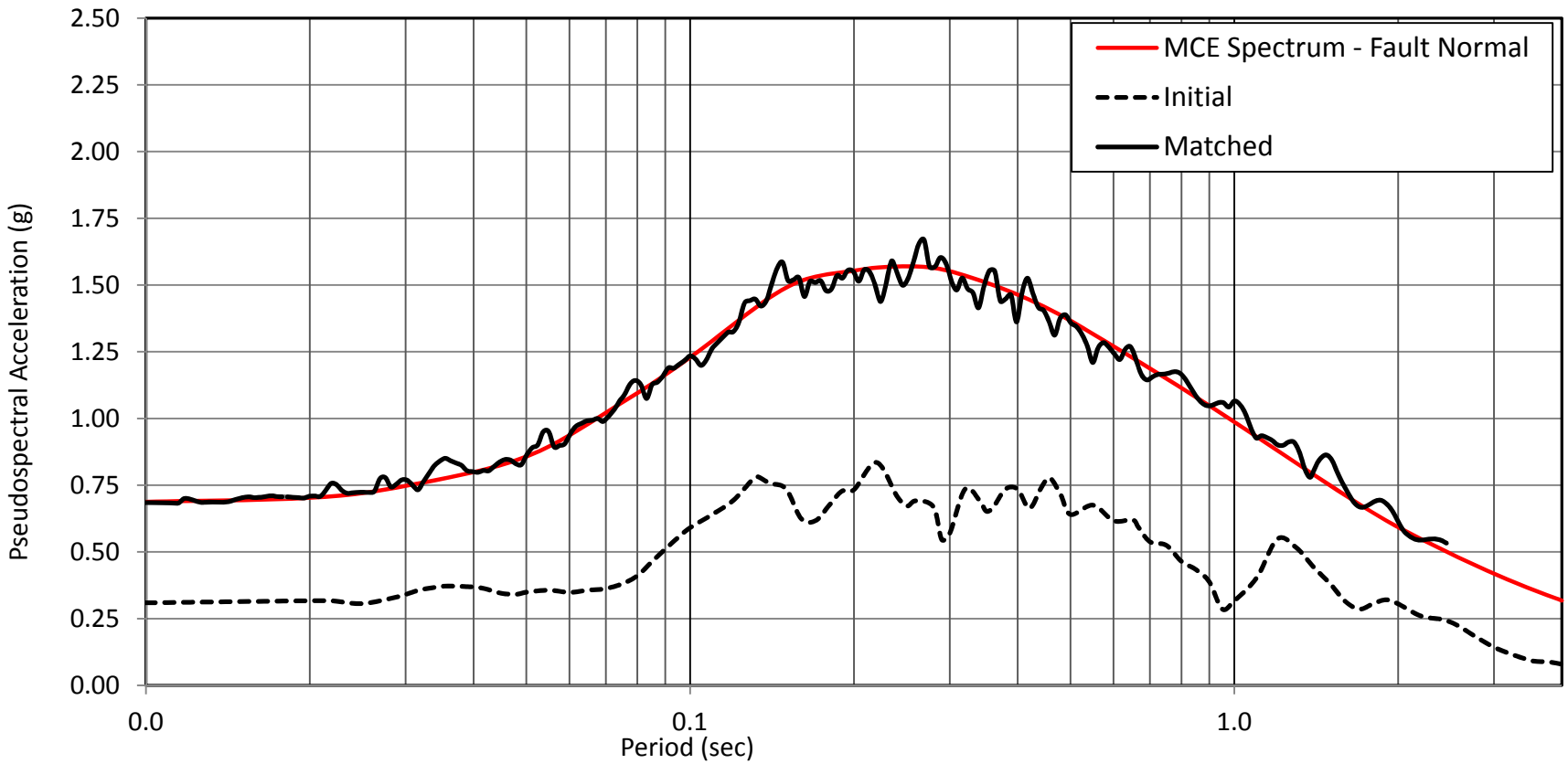
By: JF 2/12/13
Checked By: ET 2/12/13

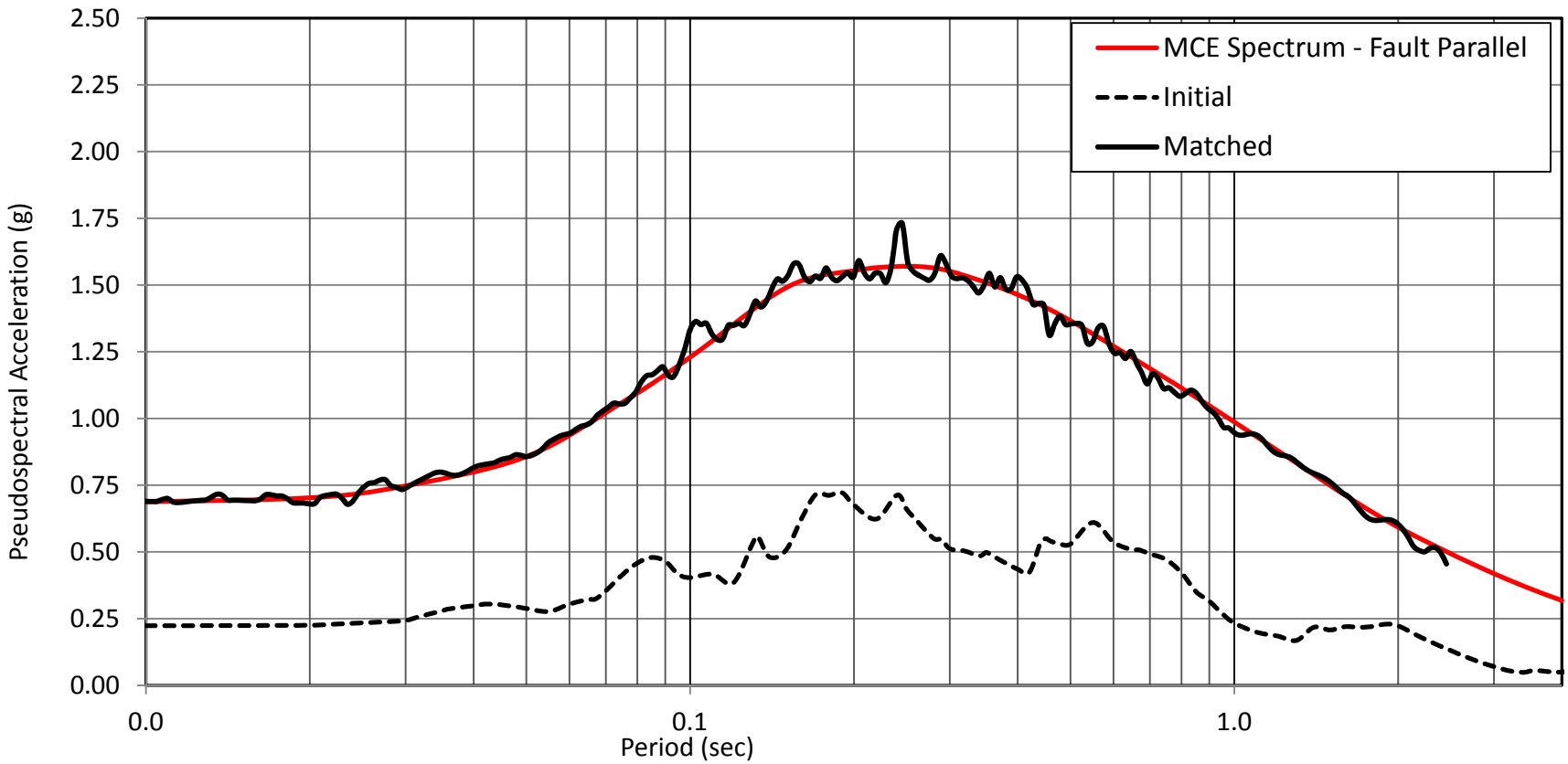
Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1979 Imperial Valley (Mw = 6.53) Record: Westmorland Fire Sta.(NGA No. 192)-Fault Parallel Figure C-4.2b



Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/12/13
Checked By: ET 2/12/13

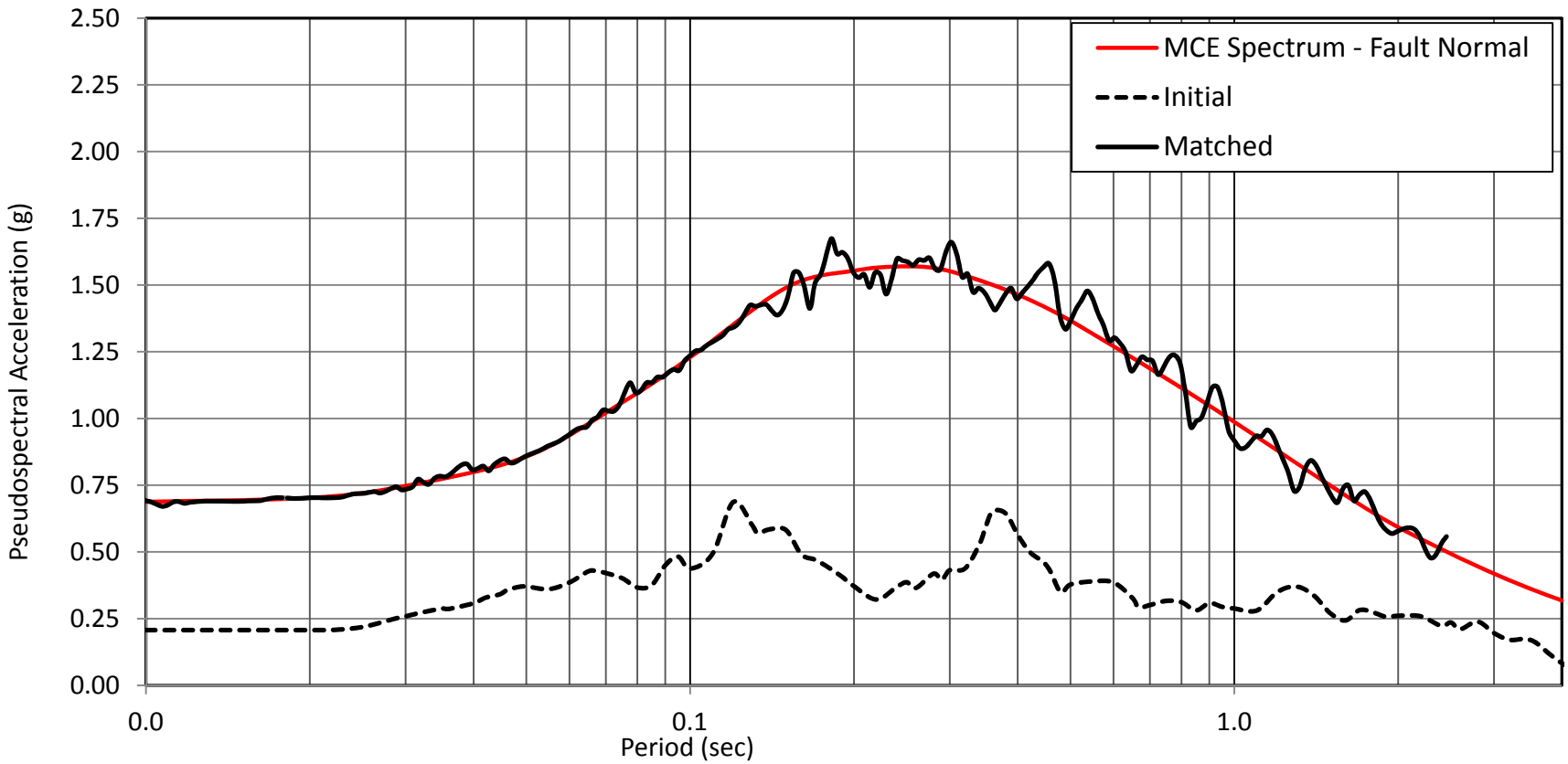
Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1987 Superstition Hills (Mw = 6.54) Record: El Centro Imp Co Cent (NGA No. 721)-Fault Normal Figure C-4.3a



Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/12/13
Checked By: ET 2/12/13

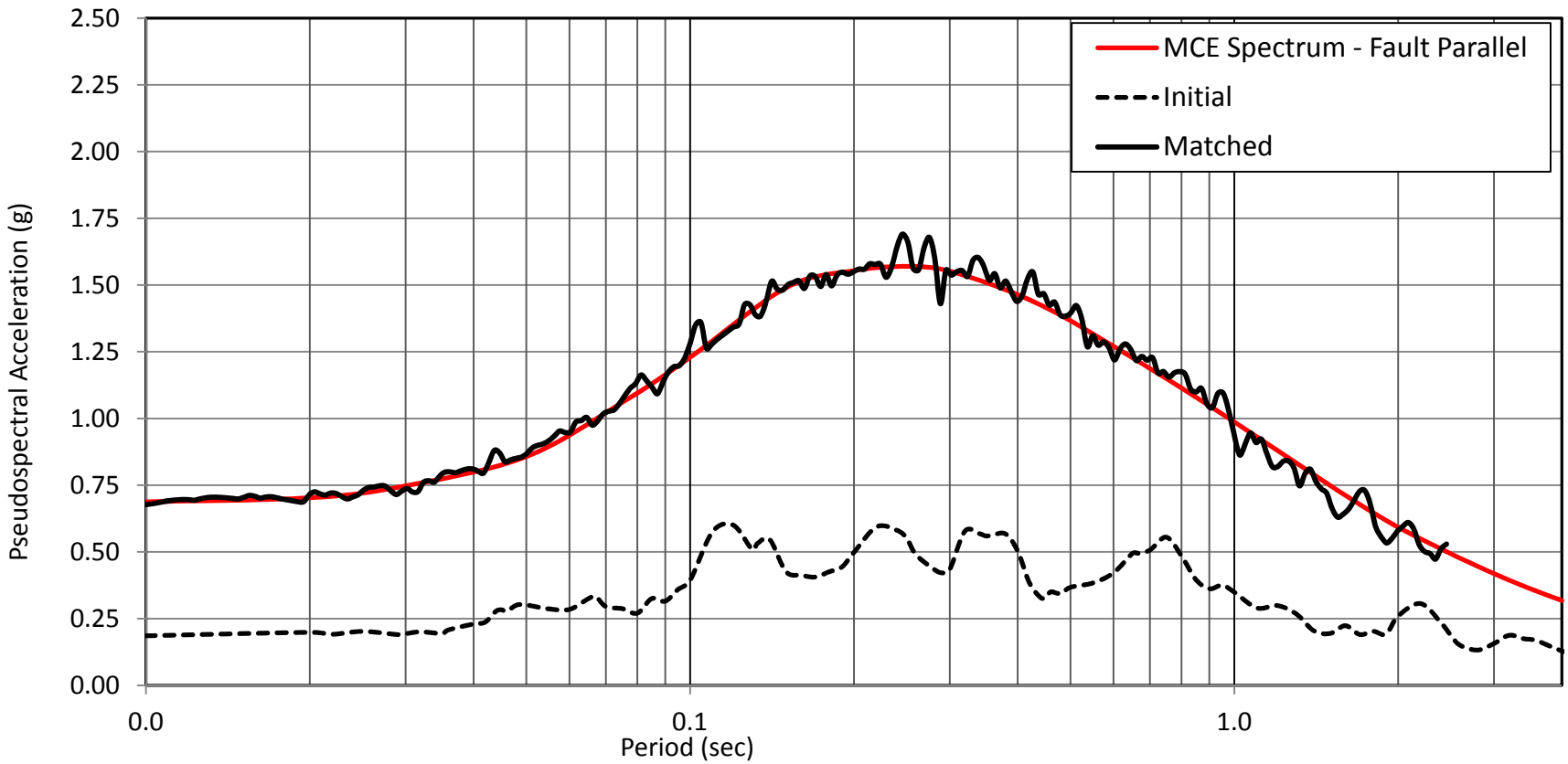
Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1987 Superstition Hills (Mw = 6.54) Record: El Centro Imp Co Cent (NGA No. 721)-Fault Parallel Figure C-4.3b



Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/12/13
Checked By: ET 2/12/13

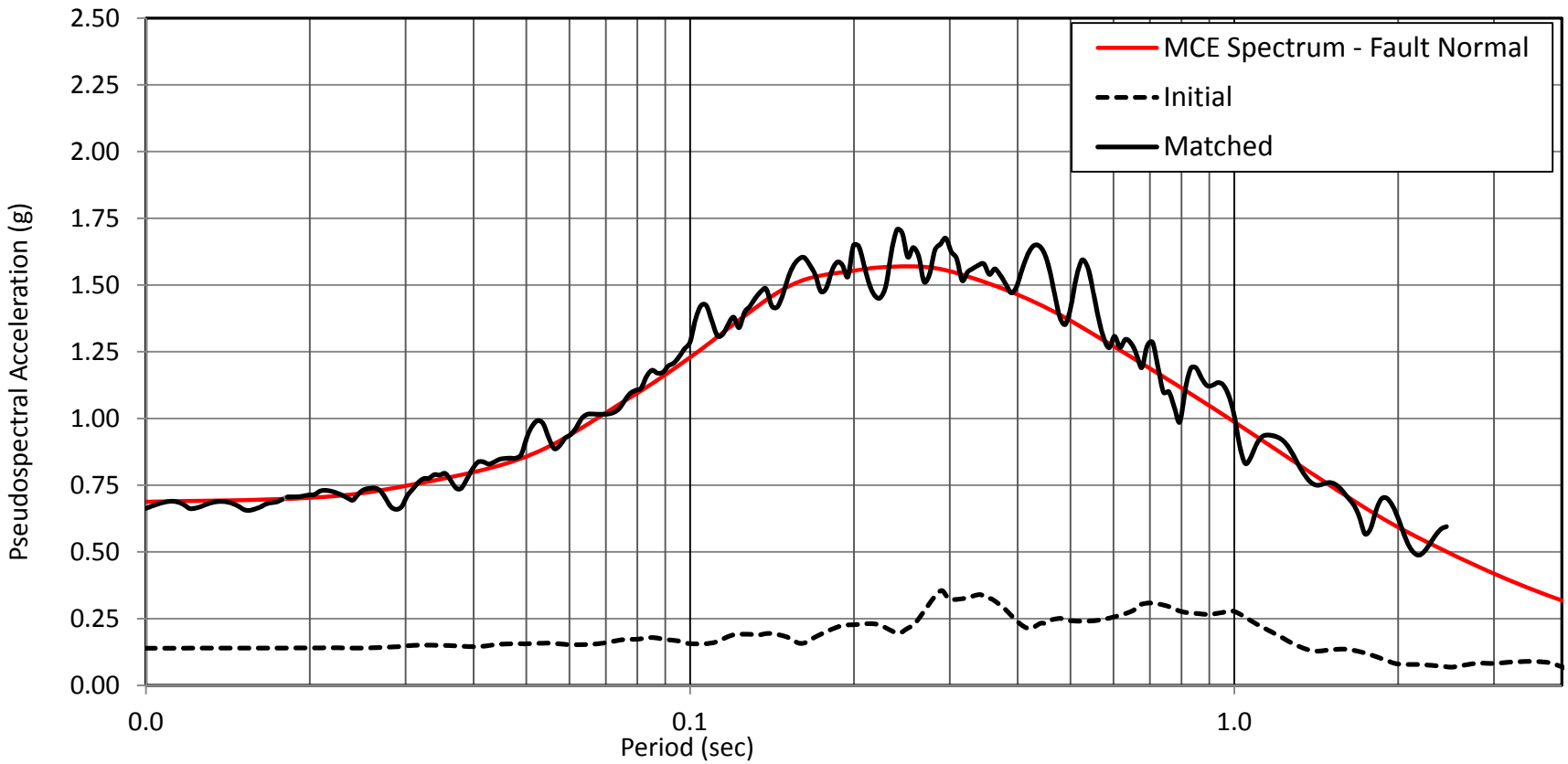
Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1987 Superstition Hills (Mw = 6.54) Record: Wildlife Liquef. Array (NGA No. 729) - Fault Normal Figure C-4.4a



Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/12/13
Checked By: ET 2/12/13

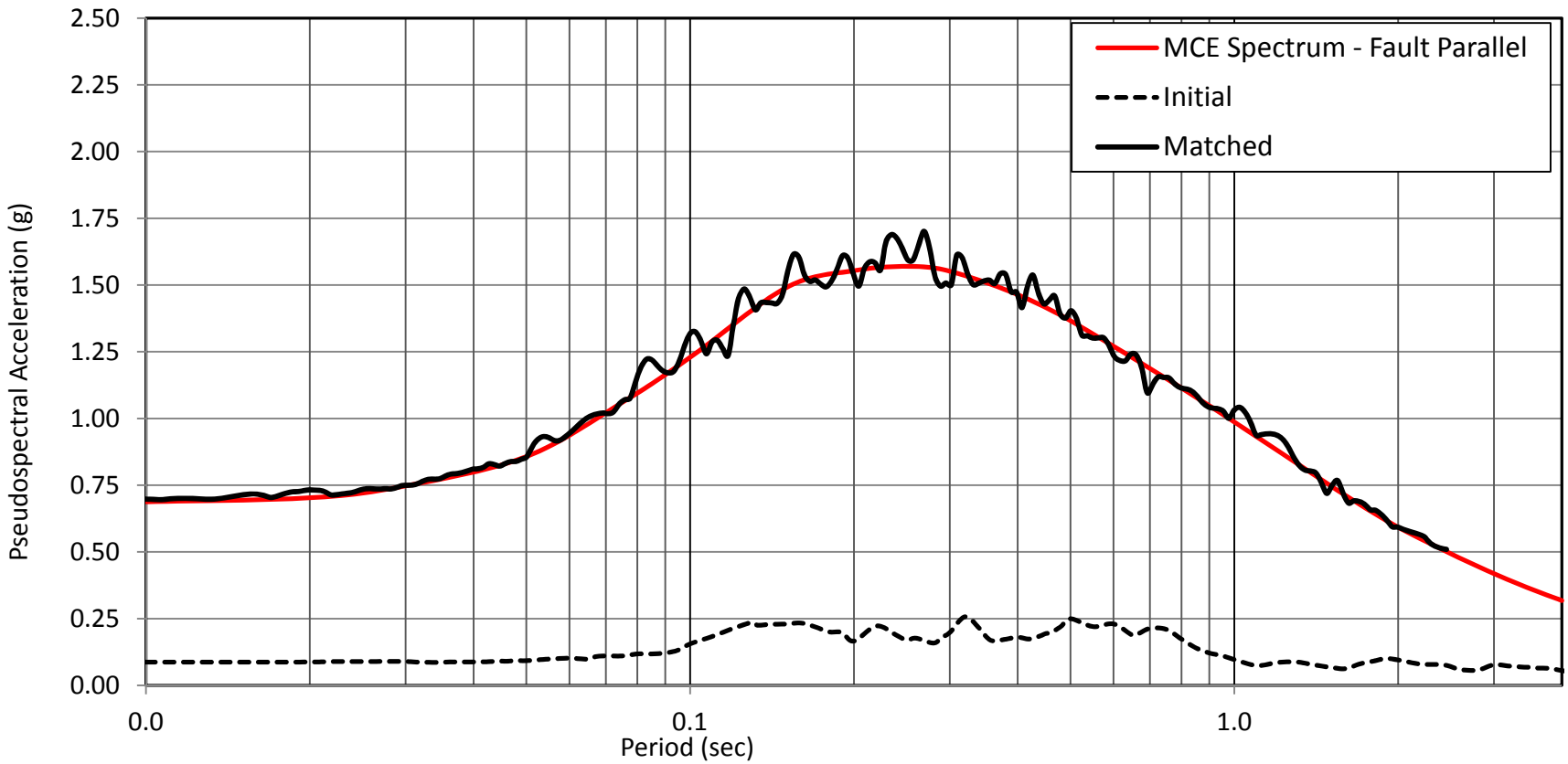
Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1987 Superstition Hills (Mw = 6.54) Record: Wildlife Liquef. Array (NGA No. 729) - Fault Parallel Figure C-4.4b



Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/12/13
Checked By: ET 2/12/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1992 Landers (Mw = 7.28) Record: Barstow (NGA No. 838) - Fault Normal Figure C-4.5a



Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/12/13
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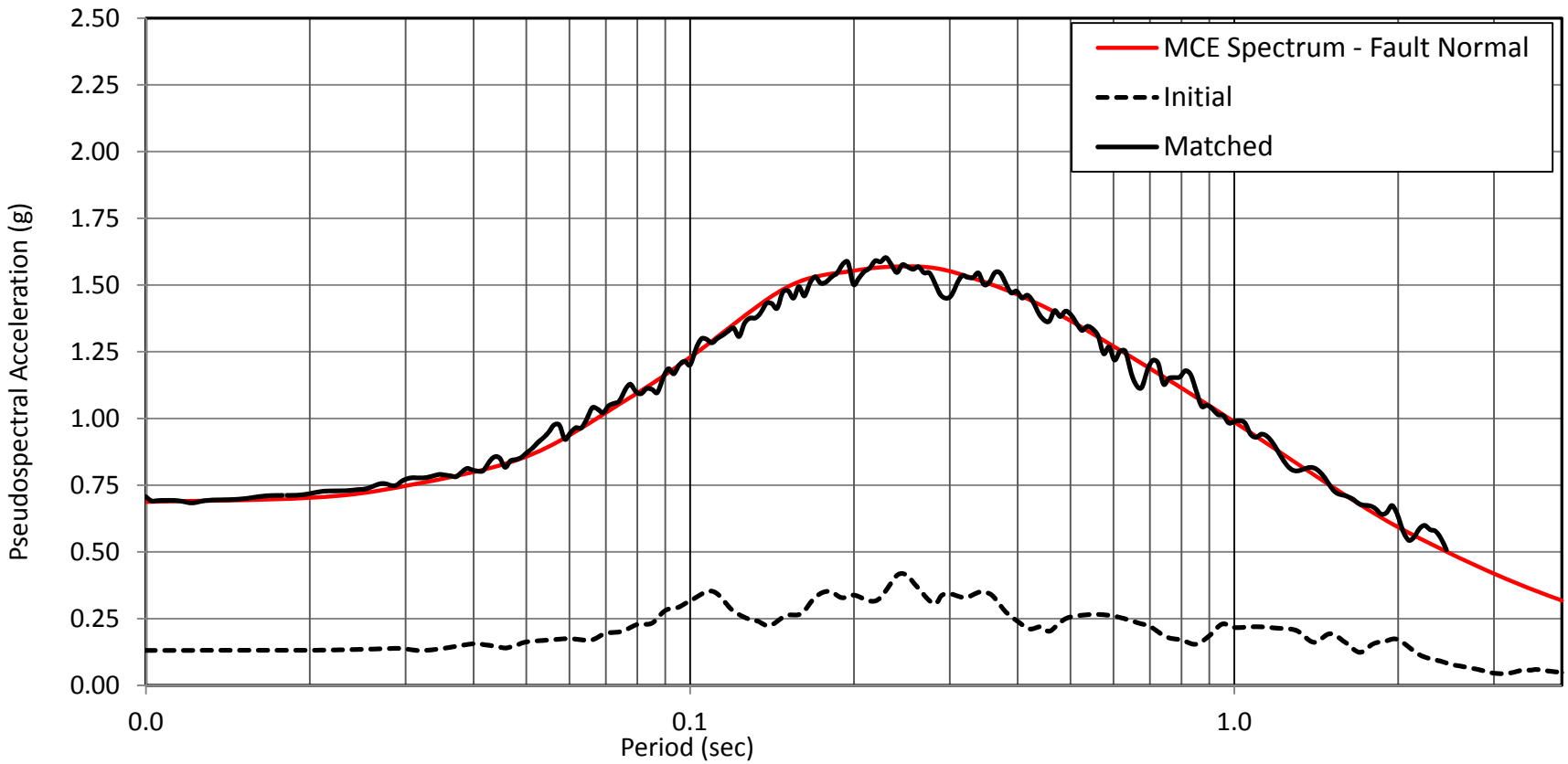

Notes:
1. Response spectra presented are for 5% structural damping

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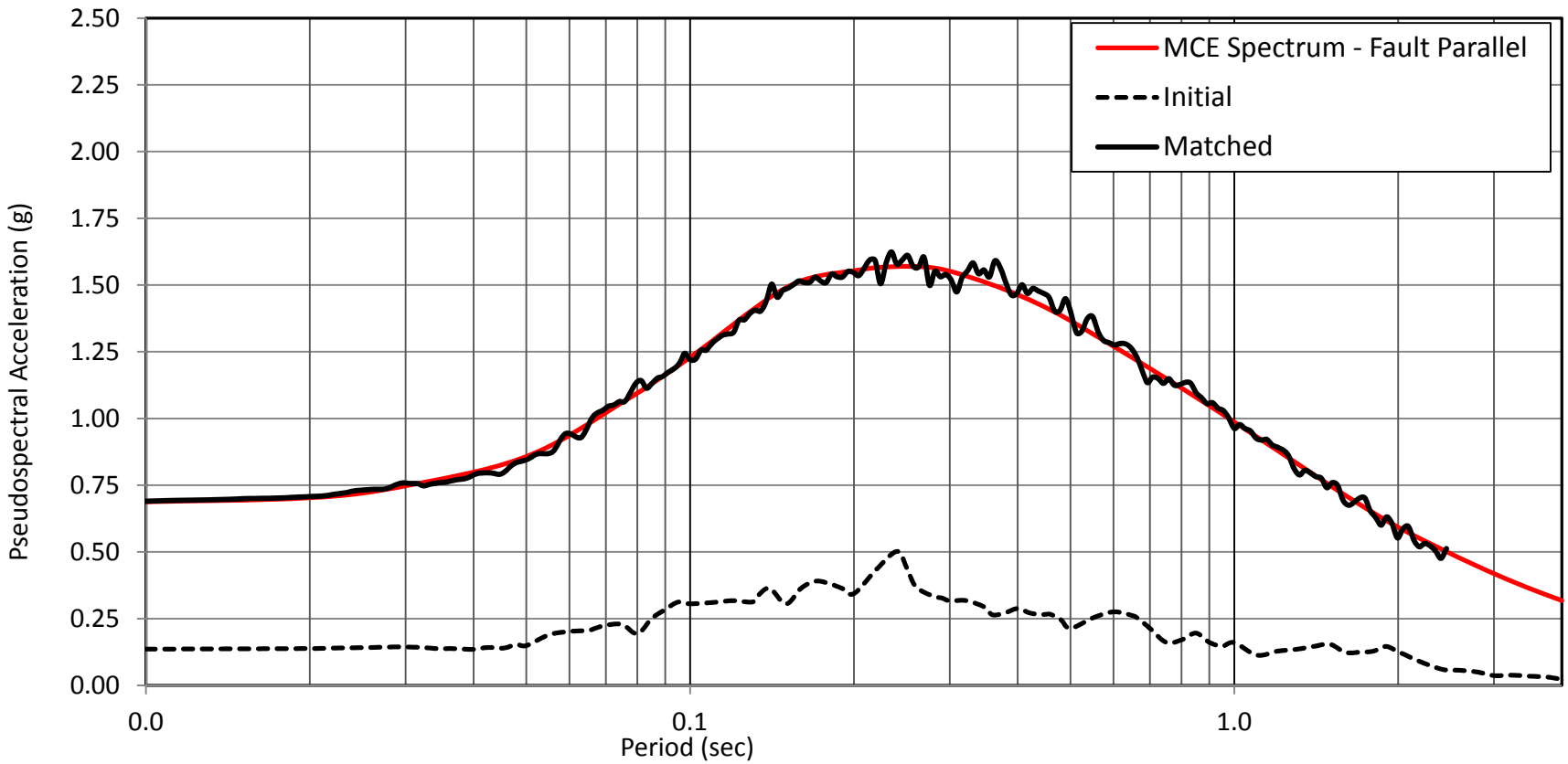
Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1992 Landers (Mw = 7.28) Record: North Palm Springs (NGA No. 882) - Fault Normal Figure C-4.6a



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1. Response spectra presented are for 5% structural damping

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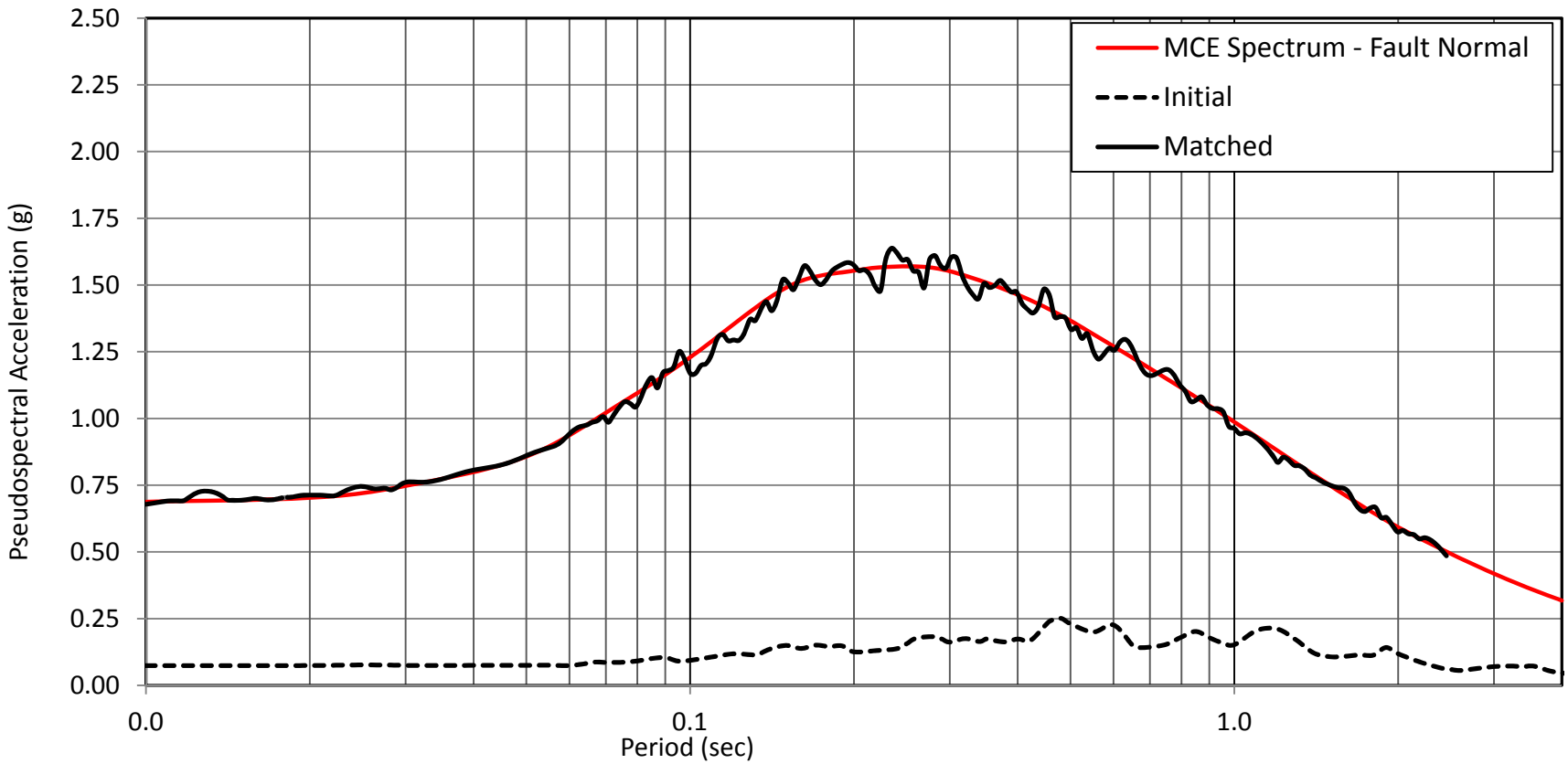

Notes:
1. Response spectra presented are for 5% structural damping

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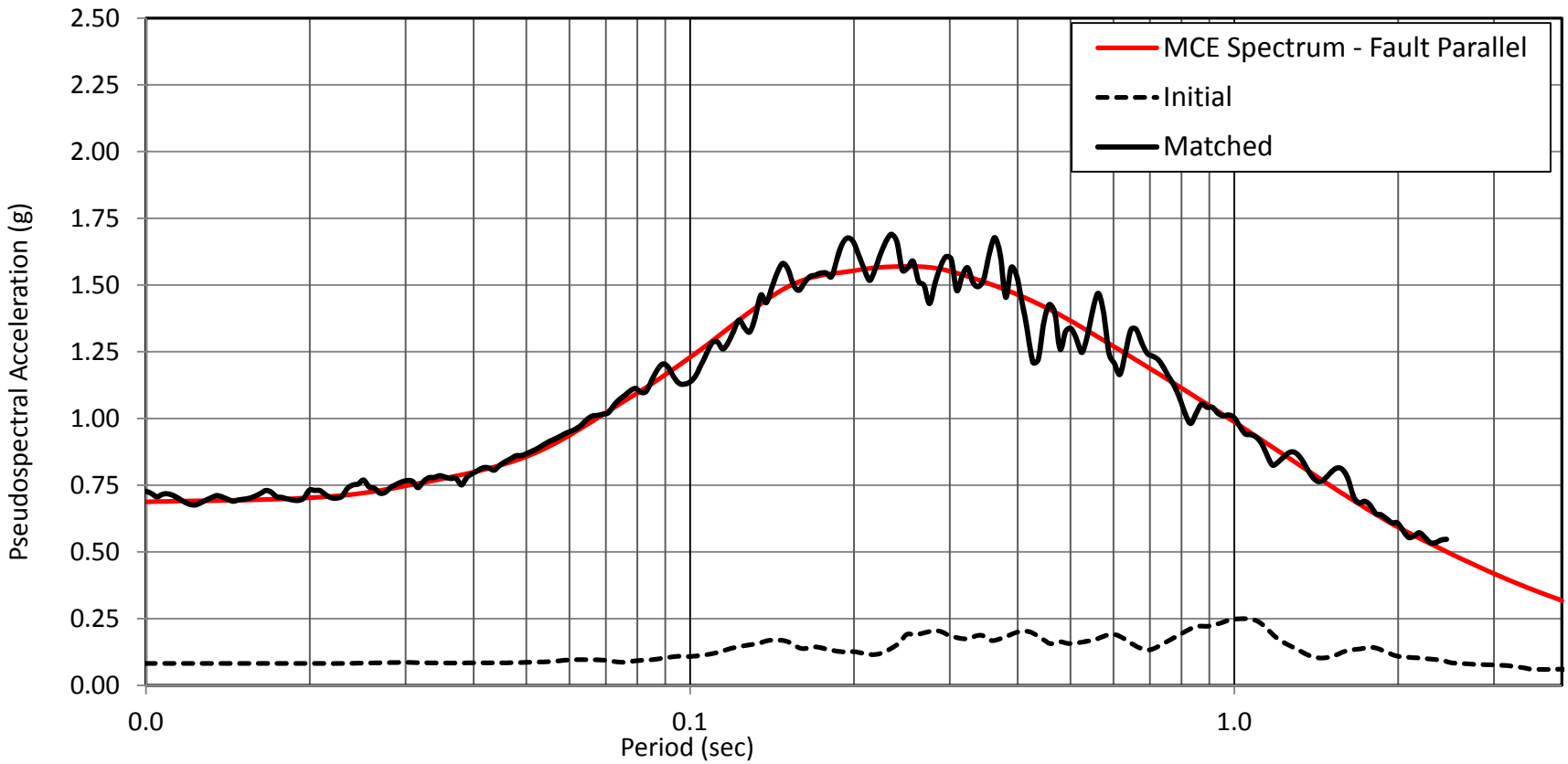

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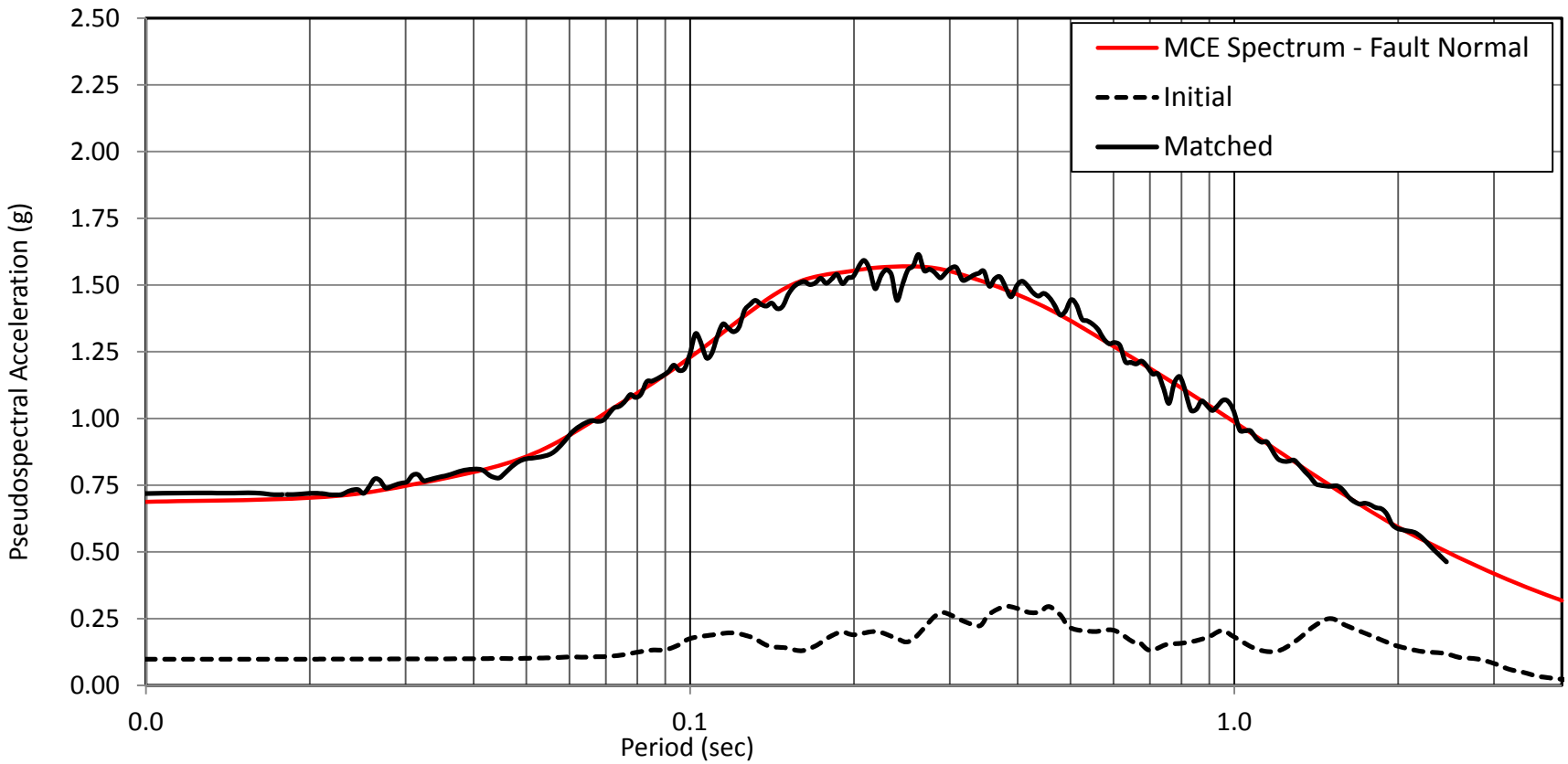
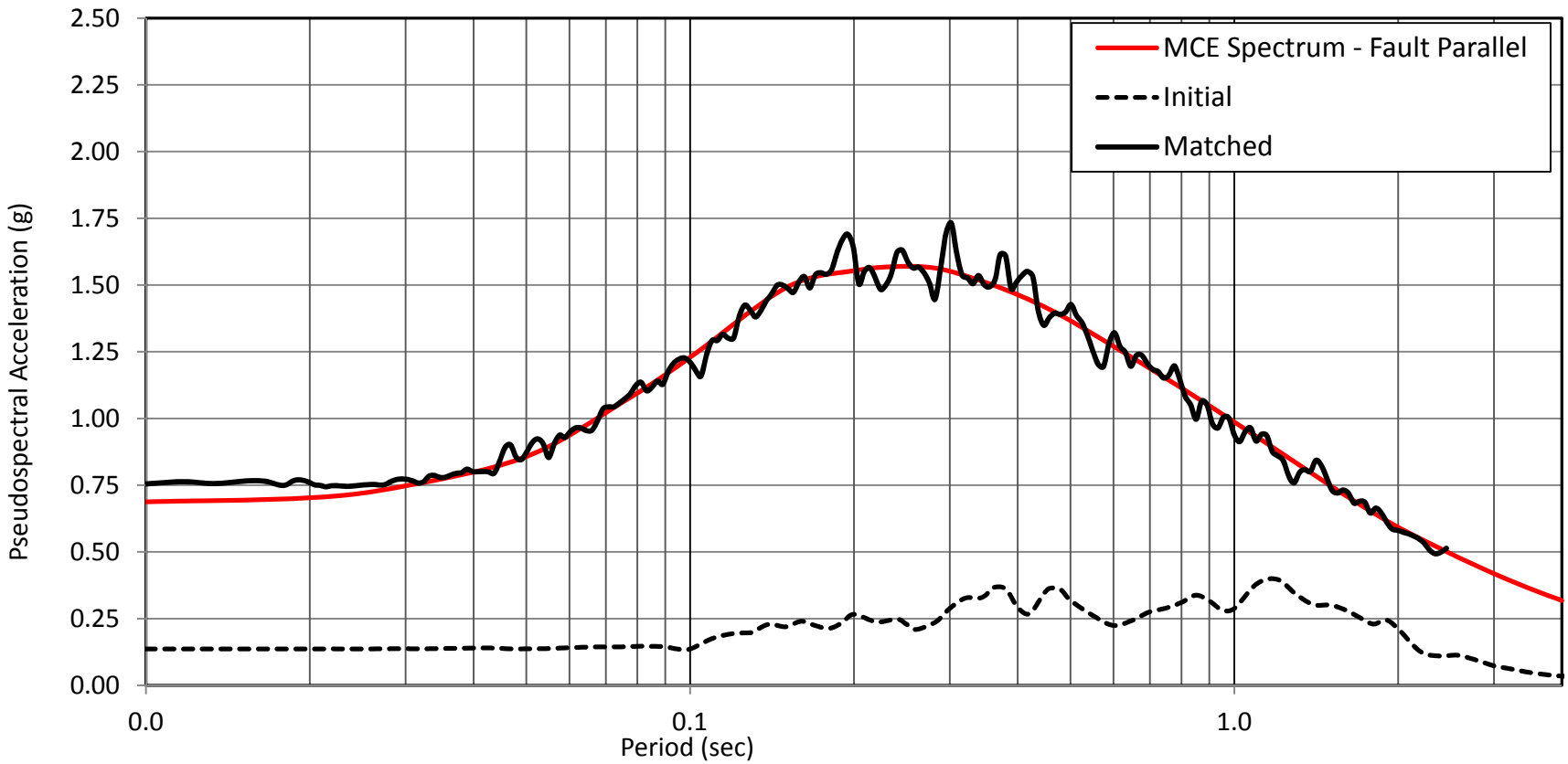


Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/13/13
Checked By: ET 2/13/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 1999 Kocaeli (Mw = 7.51) Record: Iznik (NGA No. 1166) - Fault Normal Figure C-4.8a



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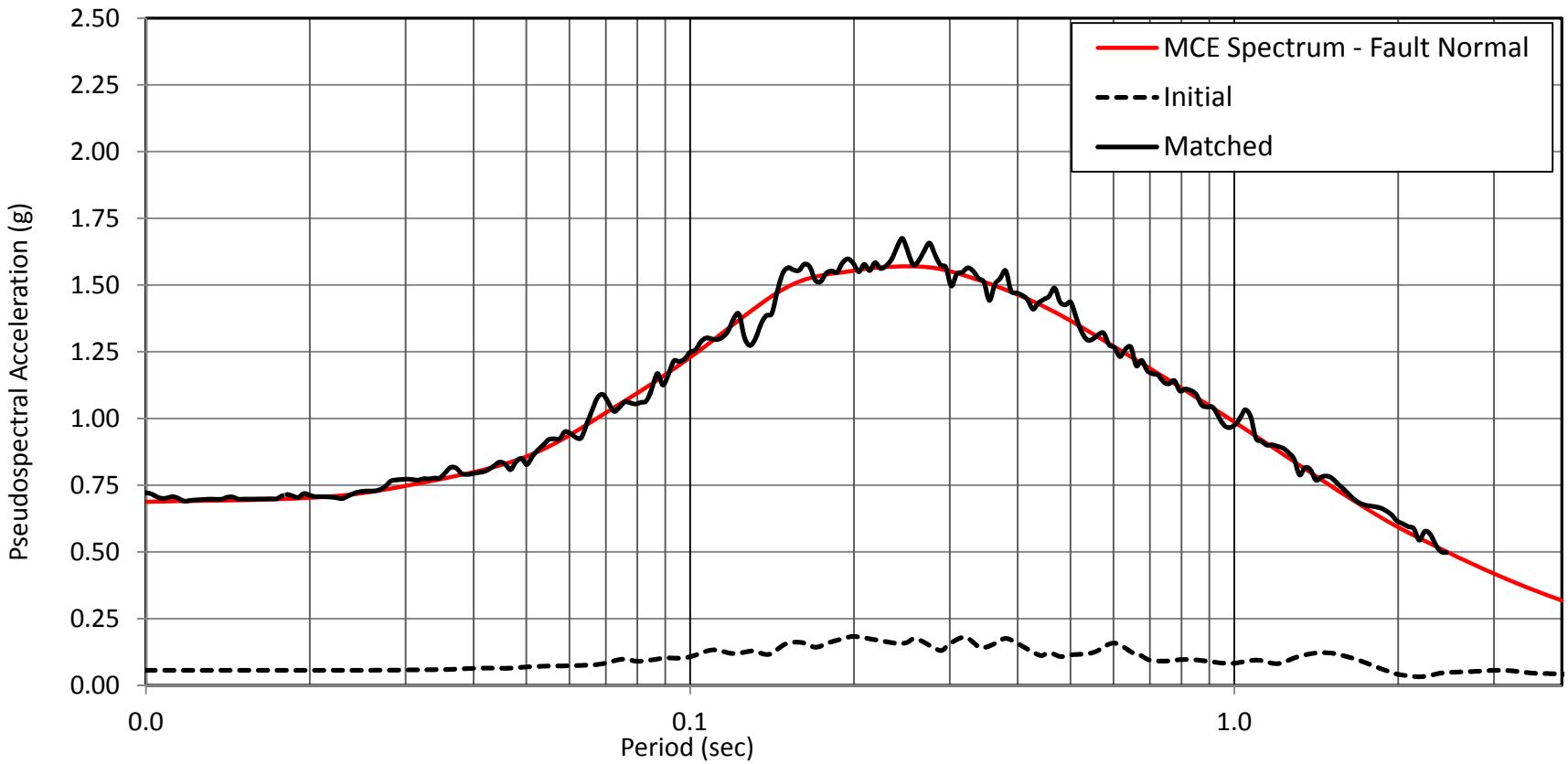

Notes:
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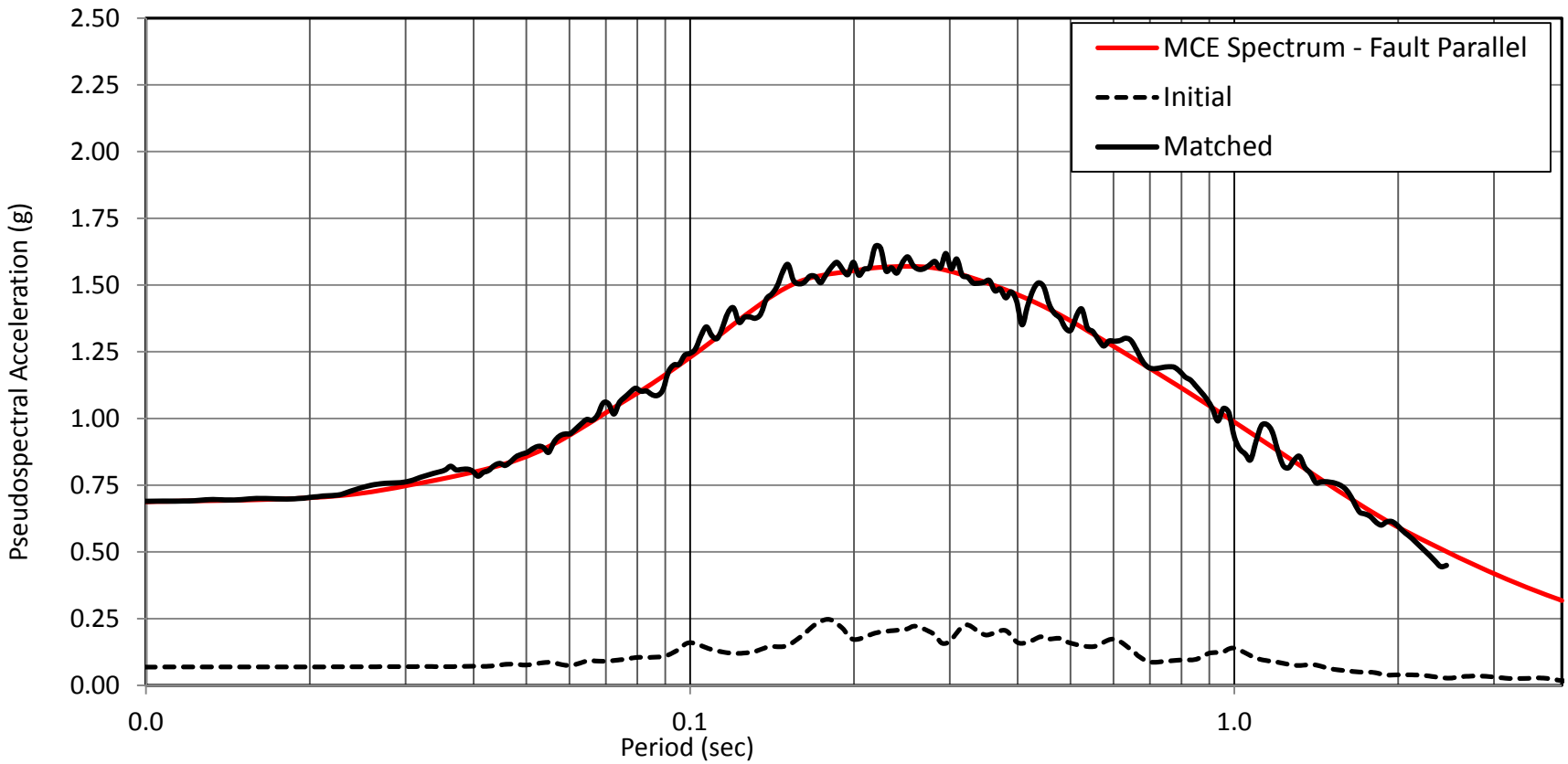

Notes:
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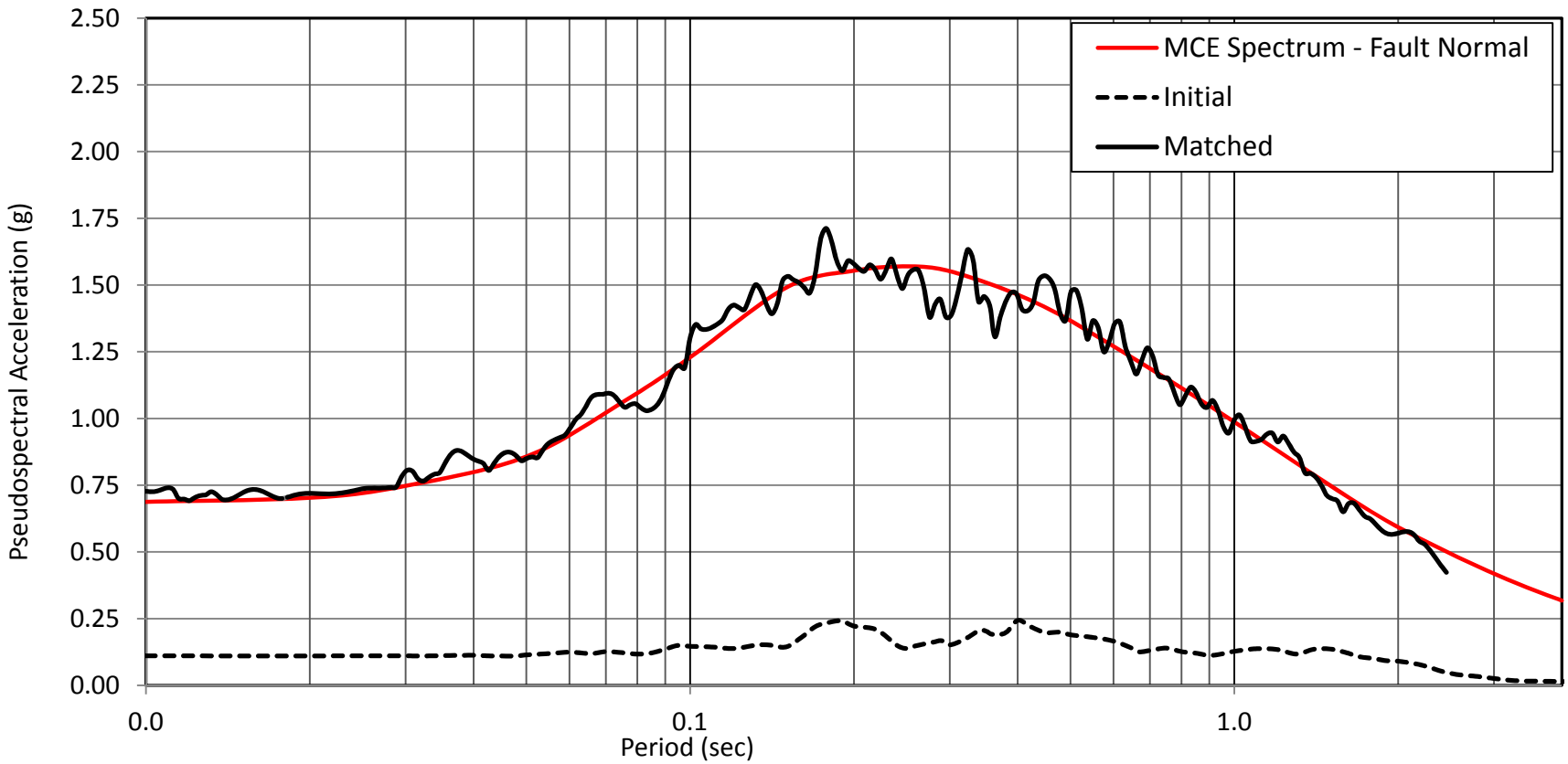
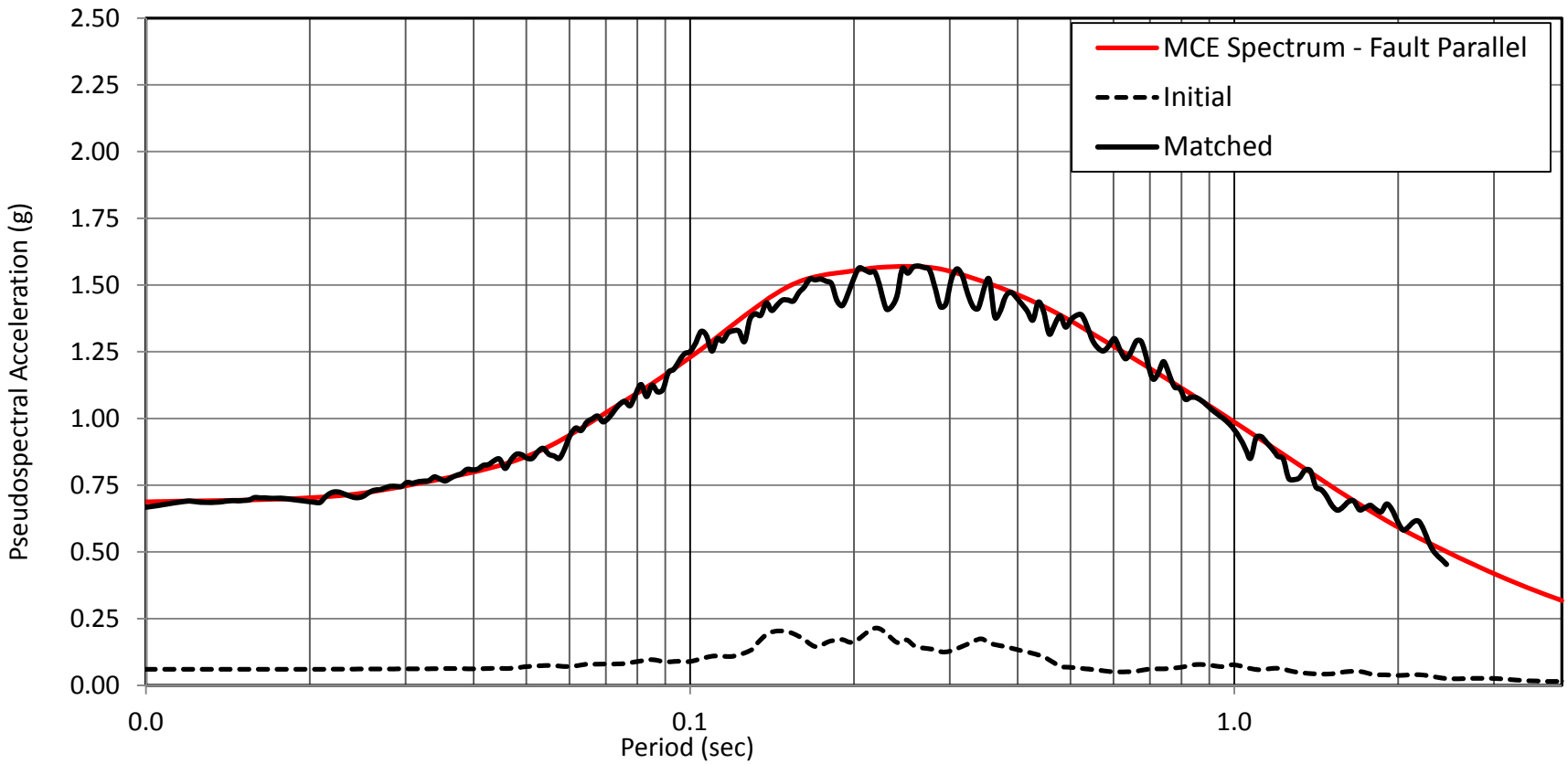


Notes:
1. Response spectra presented are for 5% structural damping

By: JF 2/13/13
Checked By: ET 2/13/13

Proposed Bed Tower Expansion Riverside Community Hospital Riverside, California Project No. 4953-13-0001	amec	Initial and Matched Response Spectra for MCE Earthquake: 2002 Denali (Mw = 7.90) Record: R-109 (NGA No. 2111) - Fault Normal Figure C-4.10a



Notes:
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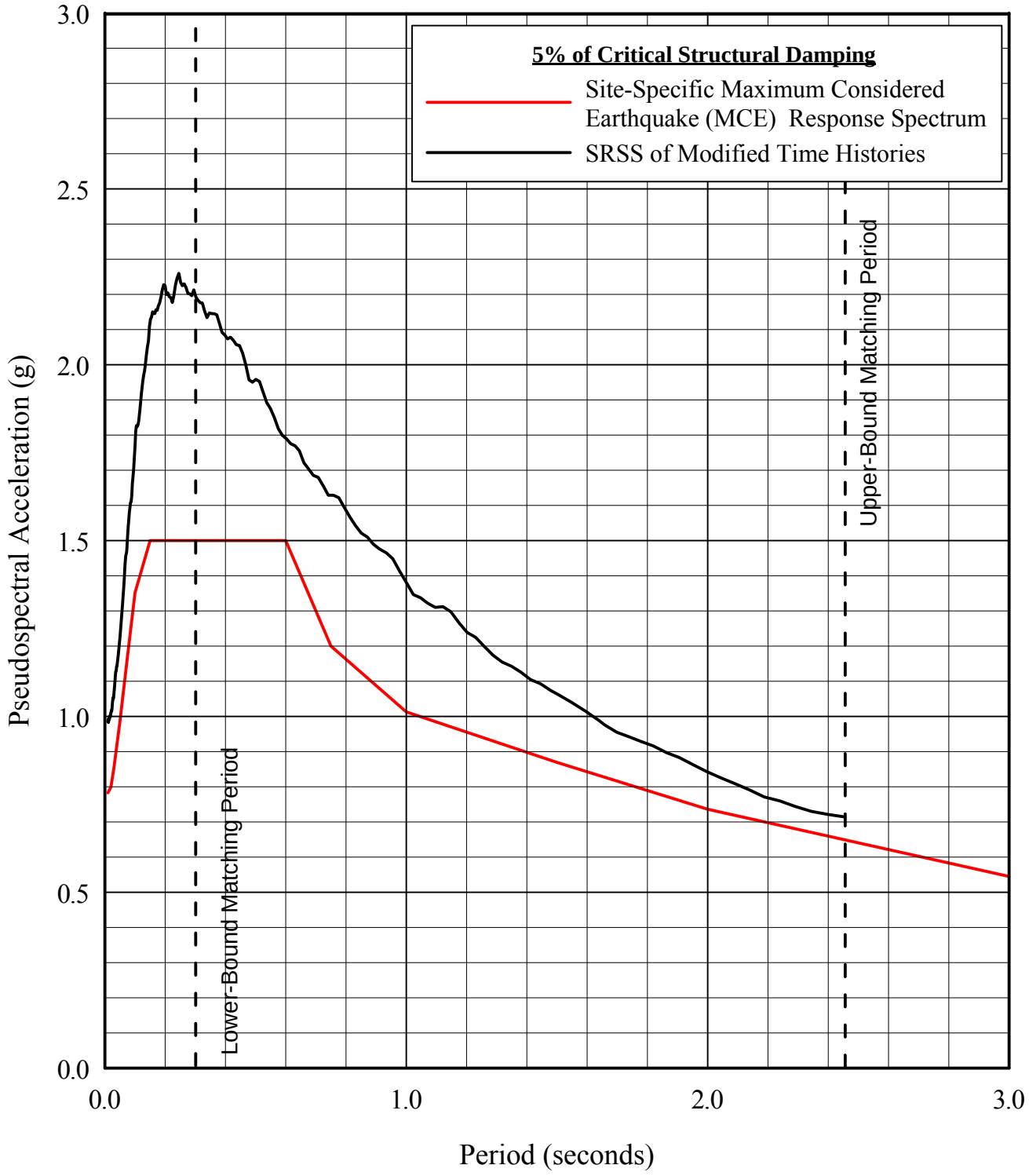

Prepared/Date: LH 1/14/13
Checked/Date: ET 1/14/13

Proposed Bed Tower Expansion Riverside Community Hospital 4445 Magnolia Avenue Riverside, California	amec	SRSS RESPONSE SPECTRA MAXIMUM CONSIDERED EARTHQUAKE Project No. 4953-13-0001 Figure C-5

APPENDIX L

Hydrology/Drainage Study

HYDROLOGY AND HYDRAULICS STUDY

for

Riverside Community Hospital

Riverside, California

May 15, 2013

Prepared for:
HCA/Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501
951-788-3151

KHA Project # 095680007
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1. Background

Riverside Community Hospital in the City of Riverside, California has been providing healthcare services to the community since 1925, when the first building was constructed on its campus located at 4445 Magnolia Avenue. Several additions and expansions to the campus have occurred since initial development including new towers, parking structures, medical office buildings, and support facilities. The campus currently operates under a conditional use permit from the 1960s within the Downtown Specific Plan – Healthcare District.

A campus master plan has been developed to identify short term and long term development needs as the demand for healthcare continues to increase. The master plan is expected to be implemented over the next 30 years in two major phases. Phase 1 consists of a new 7-story hospital bed tower, which will address seismic concerns and allow for fulfillment of the requirements in California Senate Bill (SB) 1953. The existing medical office building at 4000 14th Street (Building N) will be demolished for the new phase 1 bed tower.

Phase 2 development is expected to include, at a minimum, two additional bed towers, demolition of the remainder of the original hospital (Building A), and a new 100,000 square foot multilevel addition. Additional phase 2 developments are unknown at this time but may include future medical office buildings, outpatient buildings, parking structures, wellness centers, clinics, educational facilities, pharmacies, or other supporting uses.

Development of a new specific plan is underway to guide future development on the campus. Prior to adoption of the new specific plan, the California Environmental Quality Act (CEQA) requires projects to prepare technical studies to address potential environmental impacts. The focus of this study is to conduct an evaluation of hydrologic and hydraulic impacts for the campus under existing (predevelopment) conditions, proposed (post-development) phase 1 conditions, and proposed (post-development) phase 2 conditions to the extent known at this time (phases 2a, 2b, and 2c).

2. Existing (Predevelopment) Conditions

The subject site is currently highly developed and consists of mostly impervious surfaces such as roofs, pavement, and sidewalks with only limited amounts of pervious landscaped areas within planting beds or along the site perimeter. Due to these existing conditions, proposed phase 1 and phase 2 improvements will be considered redevelopment projects and will be replacing existing impervious area rather than creating new imperviousness. Generally, the site has relatively mild to moderate slopes of less than 5 percent with the exception of a roughly 30-foot grade difference near the

center of the site. Stormwater runoff generated from the site utilizes one of five outfall locations, as identified and labeled on the Campus Drainage Plans in the appendix.

In the vicinity of the site, the City of Riverside operates a storm drain system within the Fourteenth Street and Magnolia Avenue rights-of-way, and the Riverside County Flood Control District (RCFCD) maintains a 96-inch storm drain beneath Brockton Avenue and a 12'x7' box storm drain beneath Tequesquite Avenue. Each outfall discharges to one of these public storm drain facilities.

A 24-inch storm drain lateral in the northeast quadrant of the Brockton and Tequesquite intersection serves as Outfall #1. This lateral connects to the 12'x7' RCFCD facility in Tequesquite. Runoff from the western portion of the site including all parking structures is piped to this location via the on-site storm drainage system.

Drainage on northeast portion of the site is toward the street via sheet flow, and then continues west in the gutter along the south side of Fourteenth Street. Just prior to the westernmost driveway to the campus along Fourteenth Street, a curb inlet, identified as Outfall #2, collects surface runoff for conveyance to the public storm drain system.

The southeast portion of the site drains to an inlet at the extreme southeast corner of the campus, where the inlet serves as Outfall #3 and connects to the City owned storm system in Magnolia Avenue. Outfall #4 is an inlet located directly above the 12'x7' RCFCD box culvert system, and Outfall #5 collects and conveys all drainage from the Raincross Medical Office Building (Q).

3. Proposed (Post-development) Conditions

The phase 1 bed tower (TWR 1) will replace the existing medical office building at 4000 14th Street (N) and the adjacent surface parking area to the west. Phase 2a consists of a proposed multilevel addition (MLA) that will replace the original hospital structure (Building A) at the northeast corner of the site. Phase 2b and 2c consist of additional bed towers proposed to replace existing parking structures (I) and (J).

Since redevelopment of the campus largely only involves replacement of existing impervious surfaces, any changes in drainage patterns, peak flow rates, and runoff volumes from predevelopment to post-development conditions are expected to be insignificant as verified by the calculations in the appendix. Other potential phase 2 improvements beyond the multilevel addition and future bed towers remain unknown at this time and therefore cannot be analyzed. However, because impervious surfaces already cover most of the site, other future unidentified projects are not anticipated to substantially alter the site hydrology or downstream impacts compared to predevelopment conditions.

4. Outfall Analysis

This project is required to prepare a Water Quality Management Plan (WQMP) to demonstrate compliance with the 2010 Santa Ana Region (SAR) NPDES MS4 permit (of which the City of Riverside is a co-permittee). A site-specific WQMP has been prepared for this project (under separate cover) to addresses potential water quality and Hydromodification impacts. Therefore, for the purposes of this study, potential hydrologic impacts will be assessed using the requirements of the WQMP.

The WQMP requirements state that all projects disturbing more than one acre must evaluate whether the project would cause a hydrologic condition of concern (HCOC). A project does not cause an HCOC if any of the following conditions is met:

1. The project disturbs less than one acre and is not part of a common plan of development.

2. The volume and the time of concentration of runoff for the post-development condition is not significantly different from the pre-development condition for 2-year, 24-hour return frequency storms, as may be achieved through site design and treatment control BMPs (a difference of 5 percent or less is not considered significant)

3. All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir, or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity, no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Sensitivity Maps.

This project meets conditions 2 and 3 above. Condition 3 is satisfied because all outfalls discharge into an engineered, fully-hardened, and maintained conveyance system to the Santa Ana River as identified on the map in the appendix. Condition 2 is satisfied because each phase of the project does not result in a larger than 5 percent change in time of concentration, peak flow, or runoff volume. Detailed drainage calculations for each outfall determined using the SCS Method per Technical Release 55 (TR-55) can be found in the appendix.

5. On-Site Storm System Analysis

The on-site storm drain system has been analyzed under the worst-case (most conservative) scenario, which occurs during post-development phase 1. Using the Rational Method procedure as outlined on Plate D-1 of the RCFCD Hydrology Manual,

10-year and 100-year storm drain capacity and hydraulic grade line calculations for the on-site system have been prepared and can be found in the appendix. These calculations confirm that the on-site storm pipes analyzed have capacity to convey the 10-year storm without surcharge and that the 100-year hydraulic grade line will be contained within the system and not overtop any inlets or cause surface flooding.

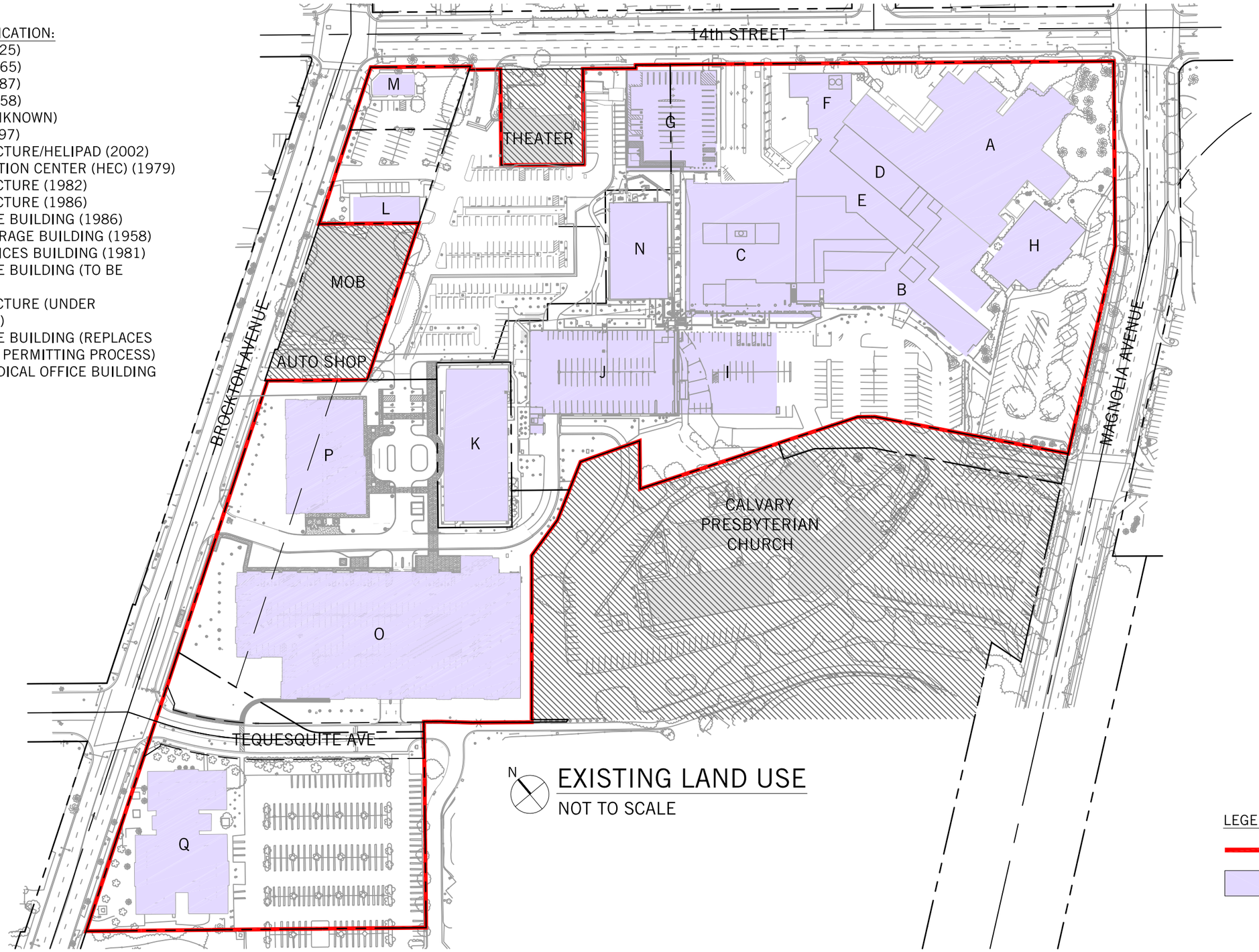
6. Water Quality Analysis

In accordance with WQMP requirements, water quality treatment for the 85th percentile, 24-hour storm event must be provided for all areas disturbed. An infiltration system consisting of 130 LF of 60-inch perforated CMP located near the northeast quadrant of the Brockton and Tequesquite intersection provides water quality treatment for recent development projects Parking Structure (O) and Medical Office Building (P). The system is located immediately upstream of Outfall #1 and the first flush of runoff from Outfall #1 drainage areas will first be diverted to the infiltration with only high flows bypassing the system.

The infiltration system was designed with excess capacity in anticipation that the system would also provide treatment for the phase 1 bed tower (TWR 1) and phase 2b and 2c towers (TWR 2). Approximately 13,200 cubic feet of storage is provided within the pipe component of the infiltration system alone, which exceeds the cumulative required design capture volume for the Parking Structure (O), Medical Office Building (P), phase 1 bed tower (TWR 1), and phase 2b and 2c towers (TWR 2). Since the phase 2a multilevel addition (MLA) drains to Outfall #2, the existing infiltration system upstream of Outfall #1 cannot provide treatment for this project phase. Therefore, upon development of the multilevel addition (MLA), a second infiltration system will need to be designed and installed on this portion of the site.

BUILDING IDENTIFICATION:

A. BUILDING A (1925)
B. BUILDING B (1965)
C. BUILDING C (1987)
D. BUILDING D (1958)
E. BUILDING E (UNKNOWN)
F. BUILDING F (1997)
G. PARKING STRUCTURE/HELIPAD (2002)
H. HEALTH EDUCATION CENTER (HEC) (1979)
I. PARKING STRUCTURE (1982)
J. PARKING STRUCTURE (1986)
K. MEDICAL OFFICE BUILDING (1986)
L. BROCKTON STORAGE BUILDING (1958)
M. WOMEN'S SERVICES BUILDING (1981)
N. MEDICAL OFFICE BUILDING (TO BE DEMOLISHED)
O. PARKING STRUCTURE (UNDER CONSTRUCTION)
P. MEDICAL OFFICE BUILDING (REPLACES BUILDING N, IN PERMITTING PROCESS)
Q. RAINCROSS MEDICAL OFFICE BUILDING (1996)



EXISTING LAND USE

NOT TO SCALE

LEGEND:

SITE PLAN BOUNDARY

EXISTING BUILDINGS

HCA

RIVERSIDE Community Hospital

RIVERSIDE COMMUNITY HOSPITAL SPECIFIC PLAN

RIVERSIDE, CALIFORNIA

05.09.2013

P+W PROJECT # 142778.001

PERKINS + WILL

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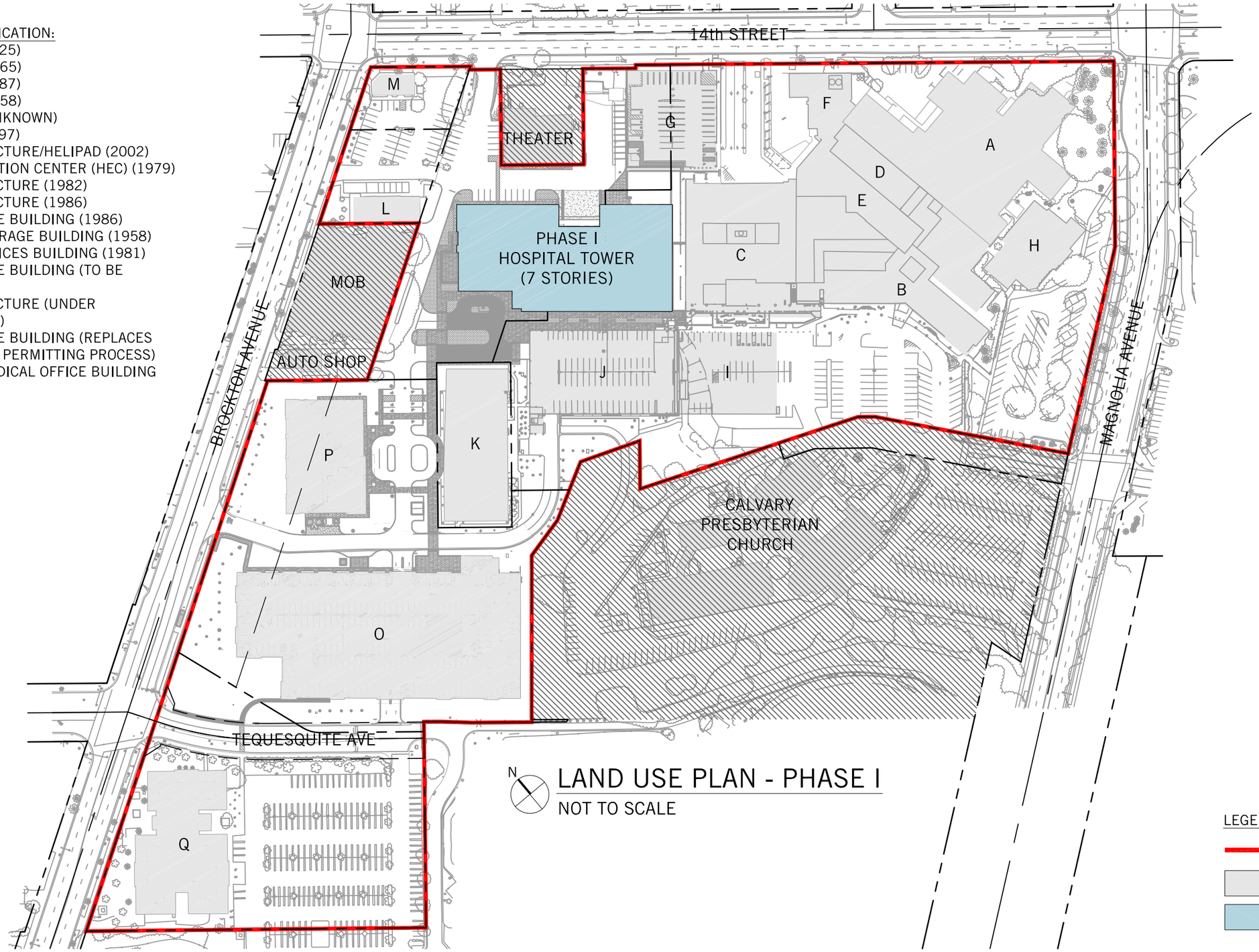

LAND USE PLAN - PHASE I

NOT TO SCALE

LEGEND:

- SITE PLAN BOUNDARY
- EXISTING BUILDINGS
- PROPOSED BUILDING

HCA RIVERSIDE Community Hospital

RIVERSIDE COMMUNITY HOSPITAL SPECIFIC PLAN

RIVERSIDE, CALIFORNIA

05.09.2013
P+W PROJECT # 142778.001

PERKINS + WILL

BUILDING IDENTIFICATION:

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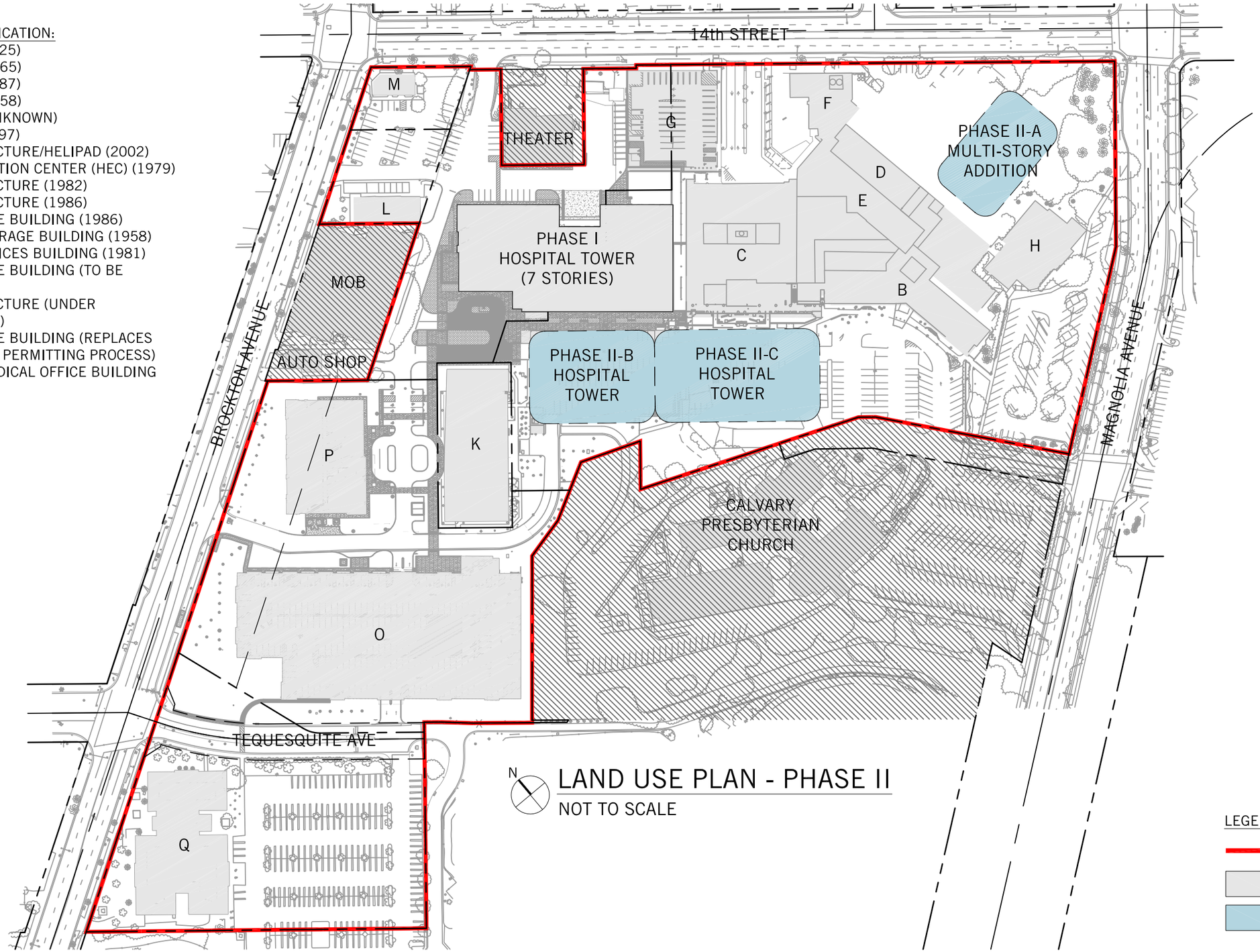
K. MEDICAL OFFICE BUILDING (1986)
L. BROCKTON STORAGE BUILDING (1958)
M. WOMEN'S SERVICES BUILDING (1981)
N. MEDICAL OFFICE BUILDING (TO BE DEMOLISHED)
O. PARKING STRUCTURE (UNDER CONSTRUCTION)
P. MEDICAL OFFICE BUILDING (REPLACES BUILDING N, IN PERMITTING PROCESS)
Q. RAINCROSS MEDICAL OFFICE BUILDING (1996)



LAND USE PLAN - PHASE II

NOT TO SCALE

LEGEND:

SITE PLAN BOUNDARY

EXISTING BUILDINGS

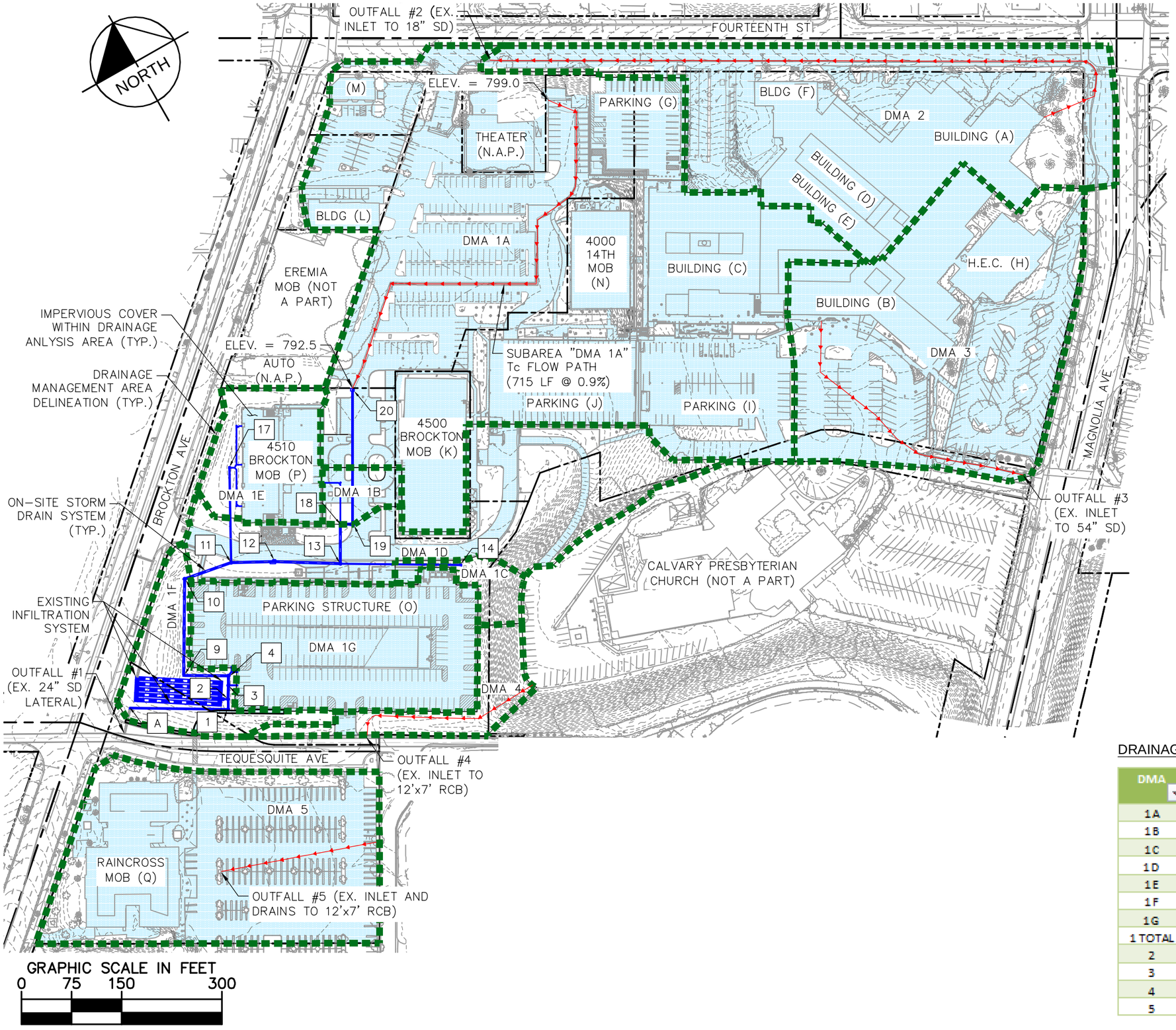
PROPOSED BUILDING ZONE

HCA RIVERSIDE Community Hospital

RIVERSIDE COMMUNITY HOSPITAL
SPECIFIC PLAN
RIVERSIDE, CALIFORNIA

05.09.2013
P+W PROJECT # 142778.001

PERKINS + WILL



DRAINAGE AREA SUMMARY

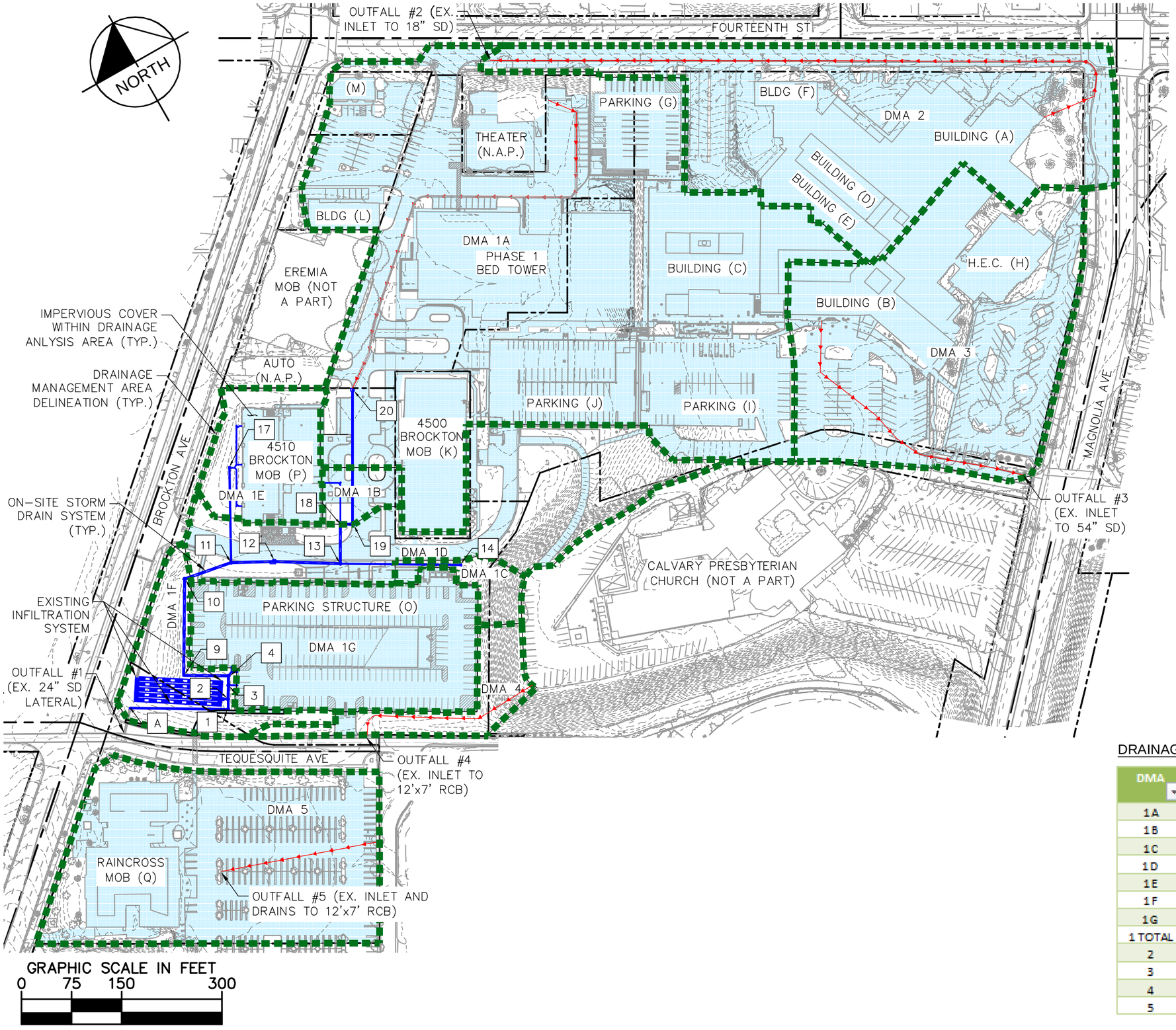
DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)
1A	20	8.66	7.68	0.98
1B	19	0.20	0.15	0.05
1C	14	0.21	0.02	0.19
1D	12	2.02	0.82	1.20
1E	17	0.75	0.48	0.28
1F	9	0.70	0.02	0.68
1G	4	1.82	1.82	0.00
1 TOTAL	EXISTING	14.36	10.98	3.38
2	EXISTING	3.81	2.49	1.31
3	EXISTING	3.51	2.96	0.56
4	EXISTING	0.46	0.02	0.43
5	EXISTING	2.82	2.32	0.49

Kimley-Horn and Associates, Inc.
765 THE CITY DRIVE, SUITE 200, ORANGE, CA 92868
PHONE: 714-939-1030 FAX: 714-938-9488
WWW.KIMLEY-HORN.COM

RIVERSIDE COMMUNITY HOSPITAL
CAMPUS EXPANSION PROJECT
4445 MAGNOLIA STREET
RIVERSIDE, CA

CAMPUS DRAINAGE PLAN
PREDEVELOPMENT CONDITION

DATE: 5/15/2013
KHA PROJECT #: 095680007



DRAINAGE AREA SUMMARY

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)
1A	20	8.66	7.76	0.90
1B	19	0.20	0.15	0.05
1C	14	0.21	0.02	0.19
1D	12	2.02	0.82	1.20
1E	17	0.75	0.48	0.28
1F	9	0.70	0.02	0.68
1G	4	1.82	1.82	0.00
1 TOTAL	EXISTING	14.36	11.06	3.30
2	EXISTING	3.81	3.33	0.47
3	EXISTING	3.51	2.96	0.56
4	EXISTING	0.46	0.02	0.43
5	EXISTING	2.82	2.32	0.49

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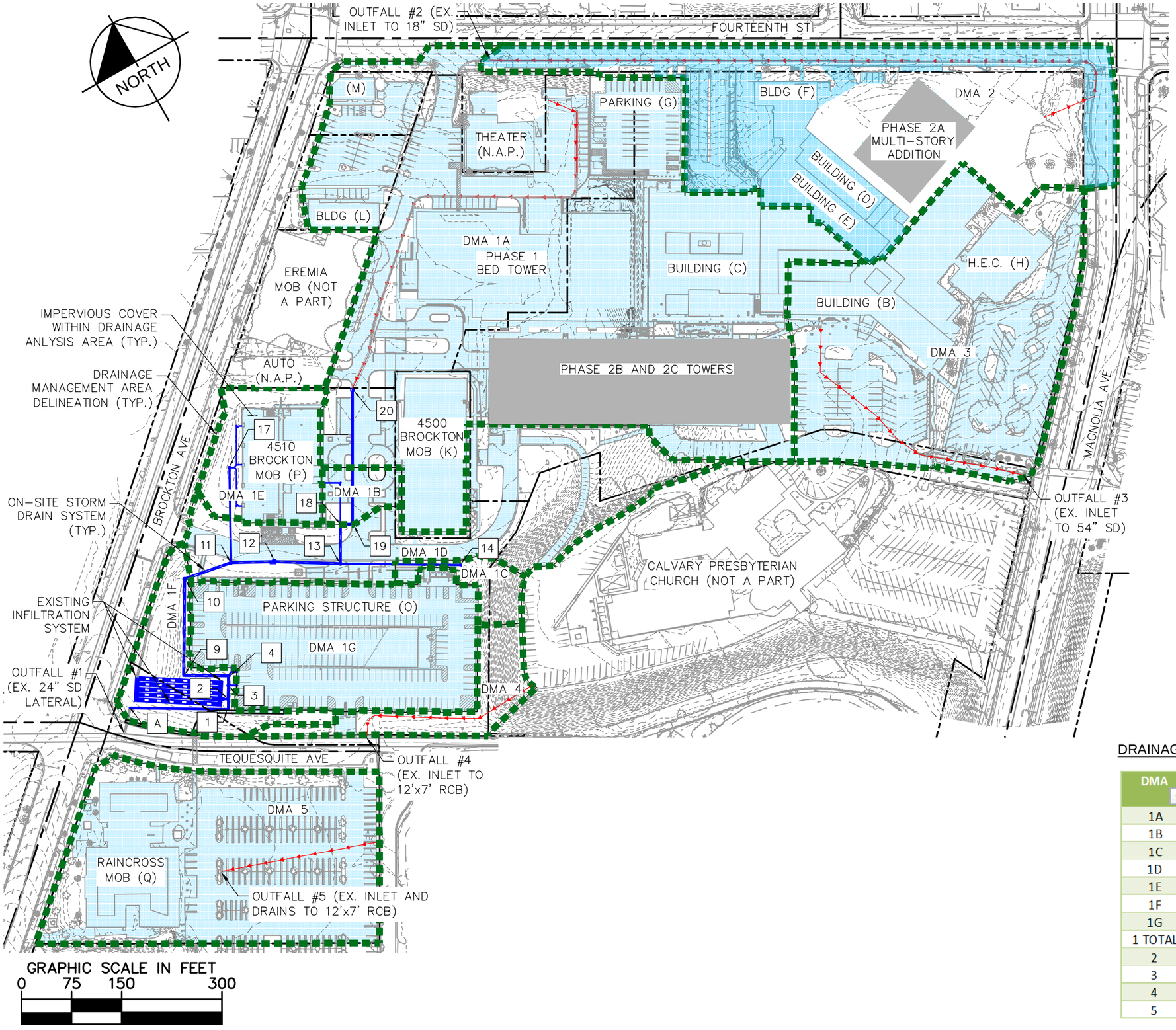
RIVERSIDE COMMUNITY HOSPITAL
CAMPUS EXPANSION PROJECT
4445 MAGNOLIA STREET
RIVERSIDE, CA

CAMPUS DRAINAGE PLAN
POST-DEVELOPMENT PHASE 1
CONDITION

DATE: 5/15/2013
KHA PROJECT #: 095680007



DRAINAGE AREA SUMMARY

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)
1A	20	8.66	7.76	0.90
1B	19	0.20	0.15	0.05
1C	14	0.21	0.02	0.19
1D	12	2.02	0.82	1.20
1E	17	0.75	0.48	0.28
1F	9	0.70	0.02	0.68
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1 TOTAL	EXISTING	14.36	11.06	3.30
2	EXISTING	3.81	2.49	1.31
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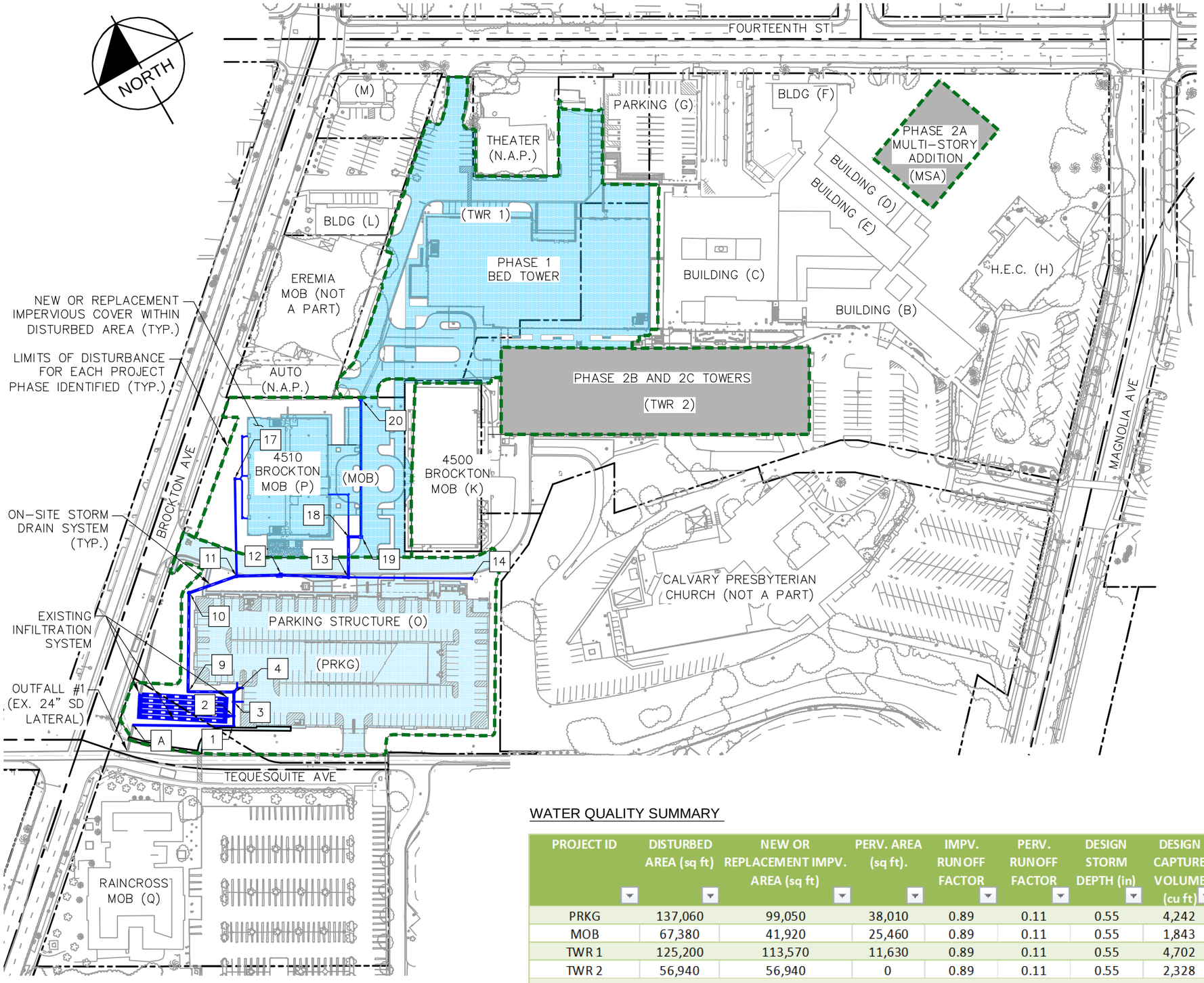
RIVERSIDE COMMUNITY HOSPITAL
CAMPUS EXPANSION PROJECT
4445 MAGNOLIA STREET
RIVERSIDE, CA

CAMPUS DRAINAGE PLAN
POST-DEVELOPMENT PHASE 2
CONDITION

DATE: 5/15/2013
KHA PROJECT #:
095680007



WATER QUALITY SUMMARY

PROJECT ID	DISTURBED AREA (sq ft)	NEW OR REPLACEMENT IMPV. AREA (sq ft)	PERV. AREA (sq ft).	IMPV. RUNOFF FACTOR	PERV. RUNOFF FACTOR	DESIGN STORM DEPTH (in)	DESIGN CAPTURE VOLUME (cu ft)	BMP VOLUME (cu ft)	NOTES
PRKG	137,060	99,050	38,010	0.89	0.11	0.55	4,242		
MOB	67,380	41,920	25,460	0.89	0.11	0.55	1,843		
TWR 1	125,200	113,570	11,630	0.89	0.11	0.55	4,702		
TWR 2	56,940	56,940	0	0.89	0.11	0.55	2,328		
TO EXISTING BMP (INFILTRATION)							13,115	13,234	PRKG, MOB, TWR 1, AND TWR 2 DRAIN TO EXISTING INFILTRATION BMP
MLA	20,000	20,000	0	0.89	0.11	0.55	818		

Kimley-Horn and Associates, Inc.
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PHONE: 714-939-1030 FAX: 714-938-9488
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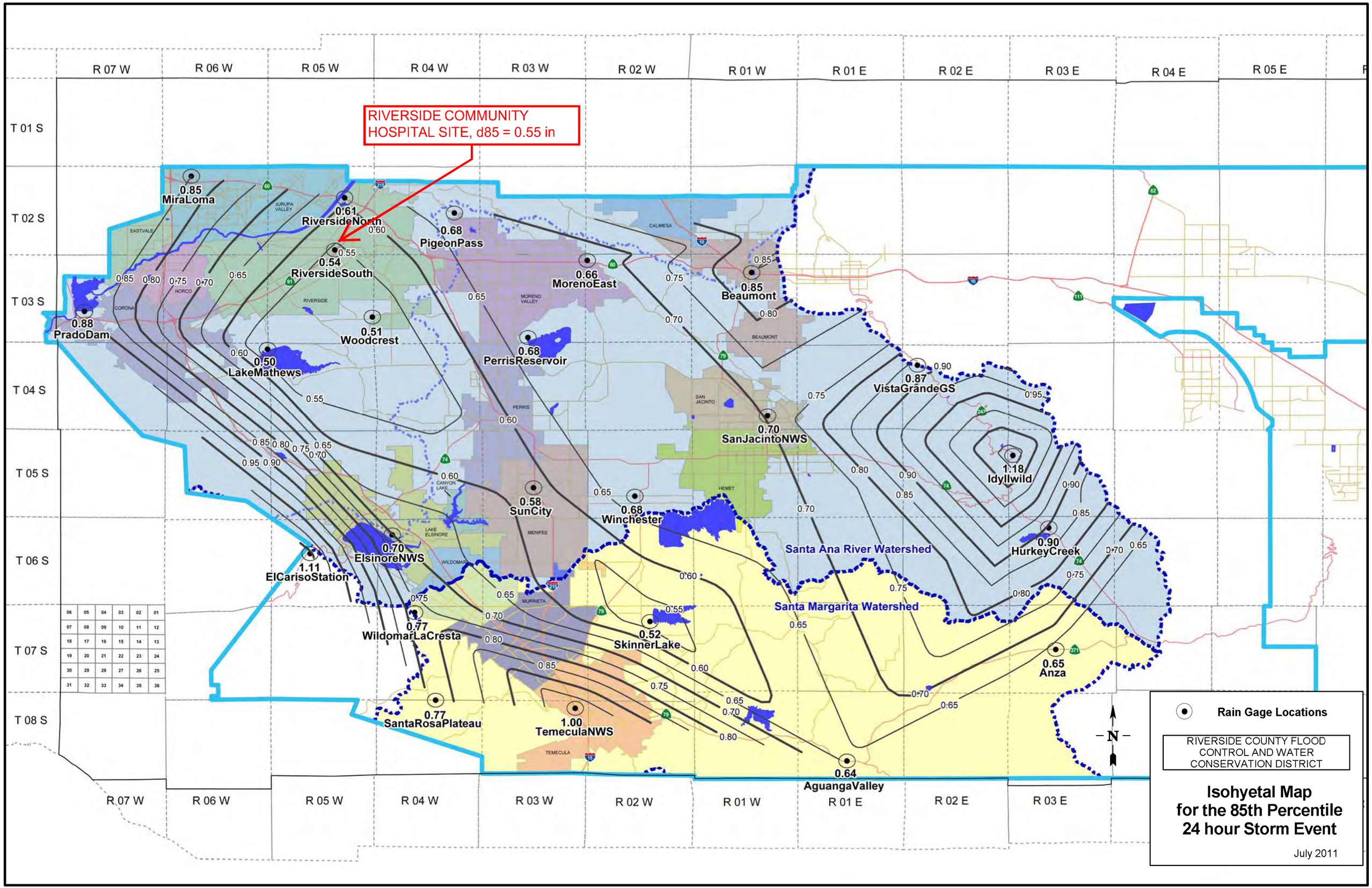
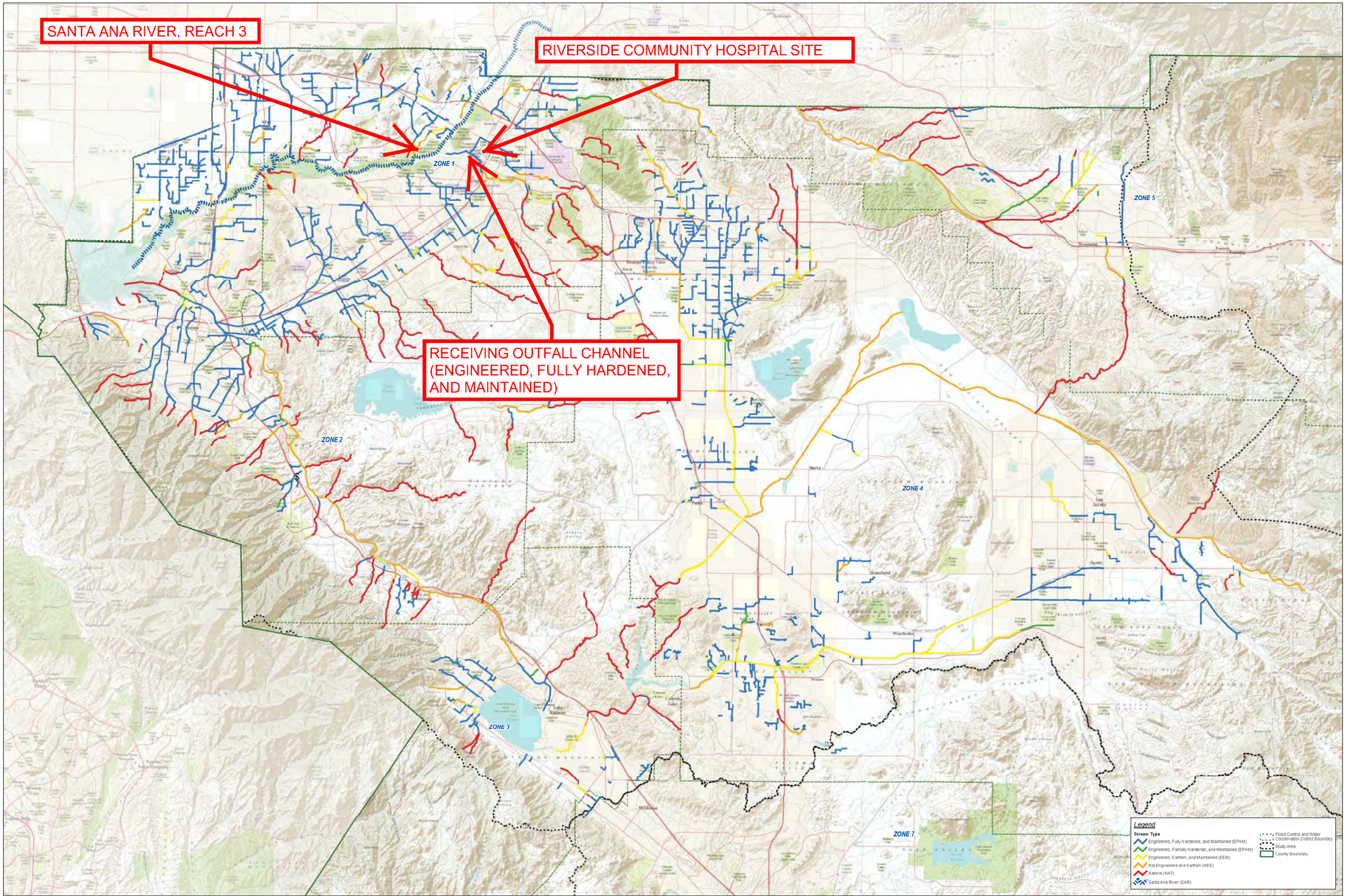
RIVERSIDE COMMUNITY HOSPITAL
CAMPUS EXPANSION PROJECT
4445 MAGNOLIA STREET
RIVERSIDE, CA

CAMPUS WATER QUALITY PLAN
POST-DEVELOPMENT PHASE 2
CONDITION

DATE: 5/15/2013
KHA PROJECT #: 095680007

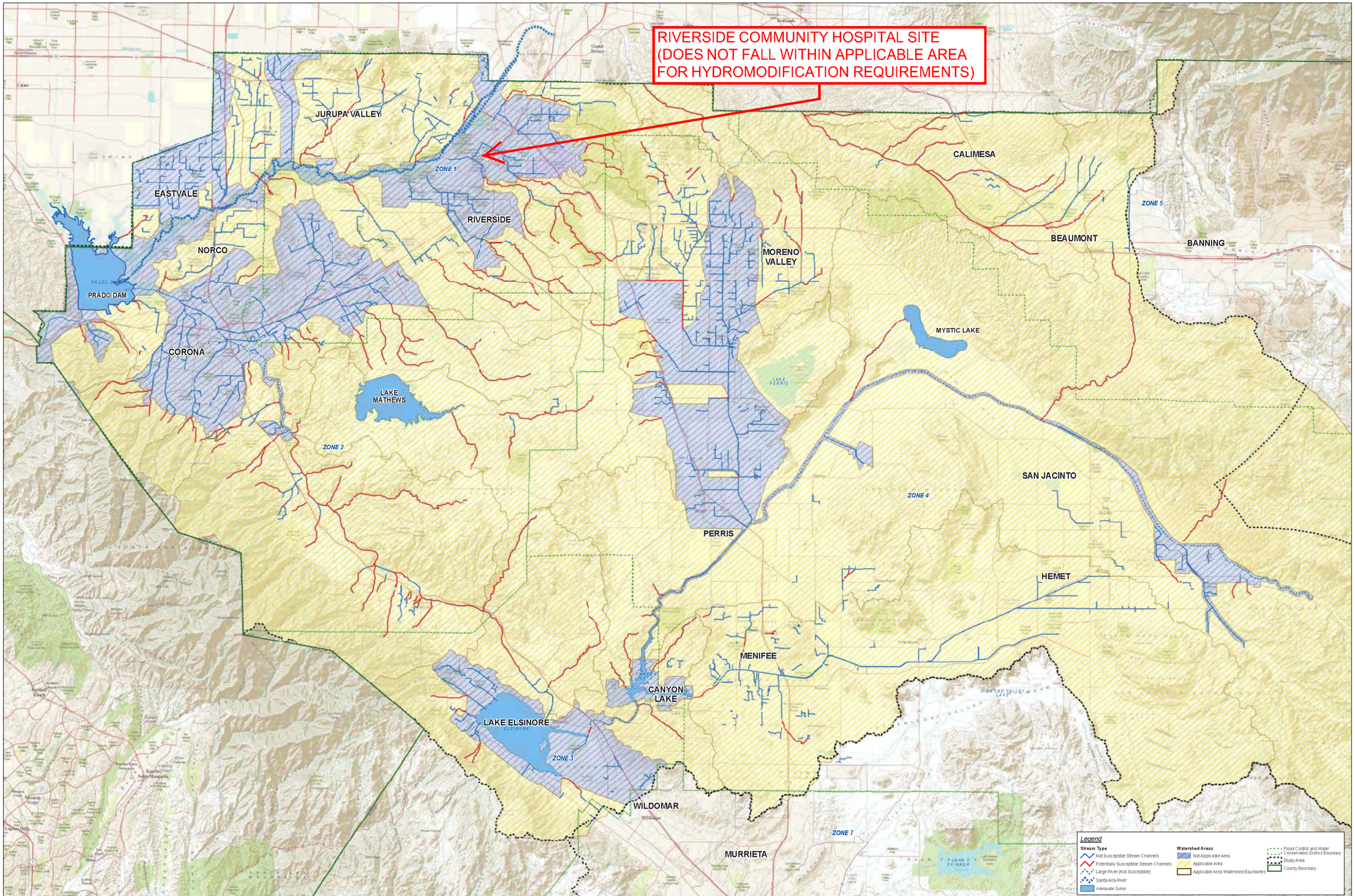

RIVERSIDE COMMUNITY HOSPITAL SITE, d85 = 0.55 in
R 07 W
R 06 W
R 05 W
R 04 W
R 03 W
R 02 W
R 01 W
R 01 E
R 02 E
R 03 E
R 04 E
R 05 E
T 01 S
T 02 S
T 03 S
T 04 S
T 05 S
T 06 S
T 07 S
T 08 S
0.85 MiraLoma
0.61 RiversideNorth
0.54 RiversideSouth
0.68 PigeonPass
0.66 MorenoEast
0.85 Beaumont
0.88 PradoDam
0.51 Woodcrest
0.50 LakeMathews
0.68 PerrisReservoir
0.87 VistaGrandeGS
0.70 SanJacintoNWS
1.18 Idyllwild
0.58 SunCity
0.68 Winchester
0.90 HurkeyCreek
0.70 ElsinoreNWS
1.11 ElCarisoStation
0.77 WildomarLaCresta
0.52 SkinnerLake
0.65 Anza
0.77 SantaRosaPlateau
1.00 TemeculaNWS
0.64 AguangaValley
Santa Ana River Watershed
Santa Margarita Watershed
N
Rain Gage Locations
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
Isohyetal Map for the 85th Percentile 24 hour Storm Event
July 2011



Existing Stream Channel Delineation Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

Map 1

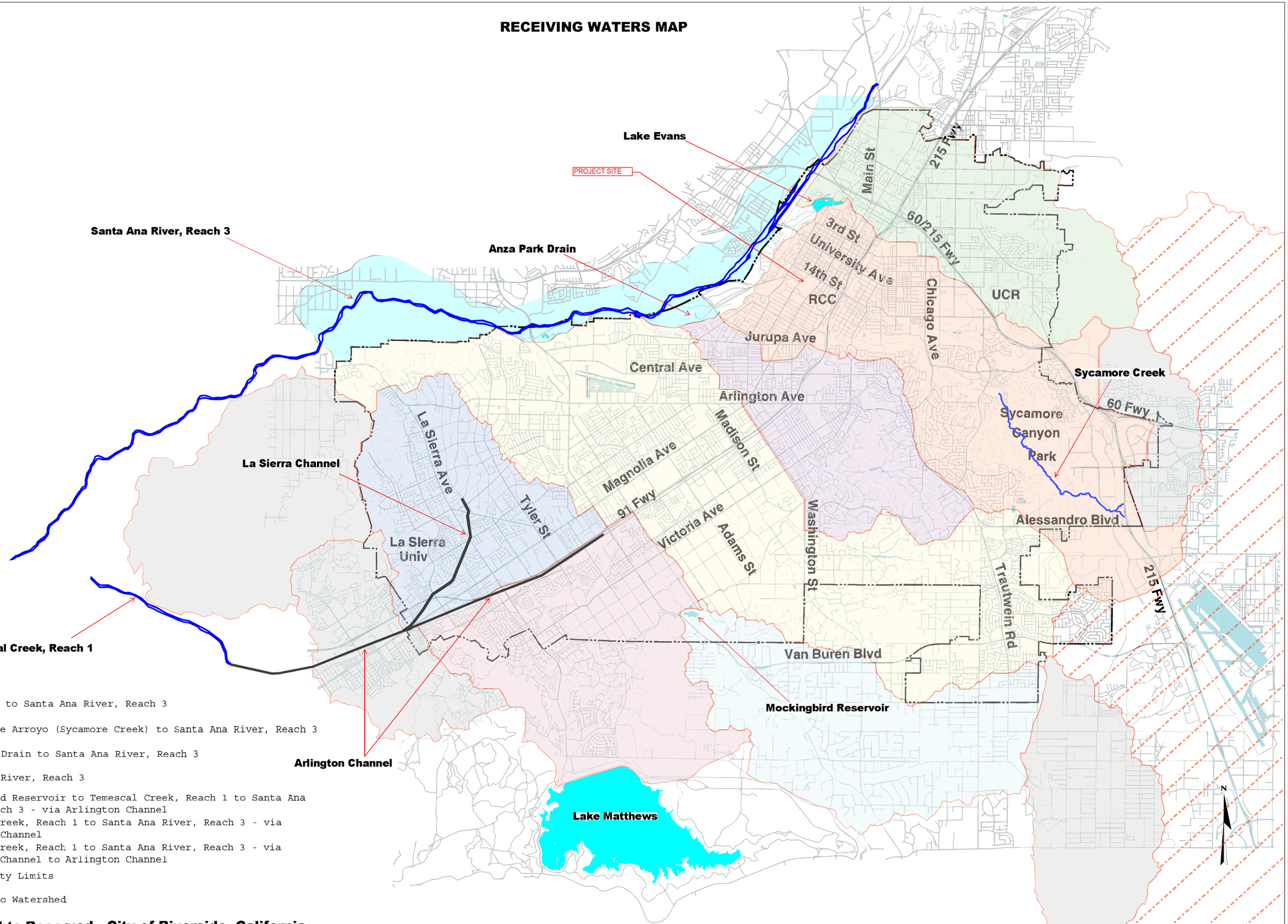


HCOC Applicability Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

Map 2

RECEIVING WATERS MAP



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NOAA's National Weather Service

Hydrometeorological Design Studies Center

Precipitation Frequency Data Server (PFDS)

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- FAQ
- Glossary

Precipitation Frequency (PF)
- PF Data Server
- PF in GIS Format
- PF Maps
- Temporal Distr.
- Time Series Data
- PFDS Perform.
- PF Documents

Probable Maximum Precipitation (PMP)
- PMP Documents

Miscellaneous
- Publications
- AEP Storm Analysis
- Record Precipitation

Contact Us
- Inquiries
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USA.gov

NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES: CA

DATA DESCRIPTION

Data type: precipitation depth | Units: english | Time series type: partial duration

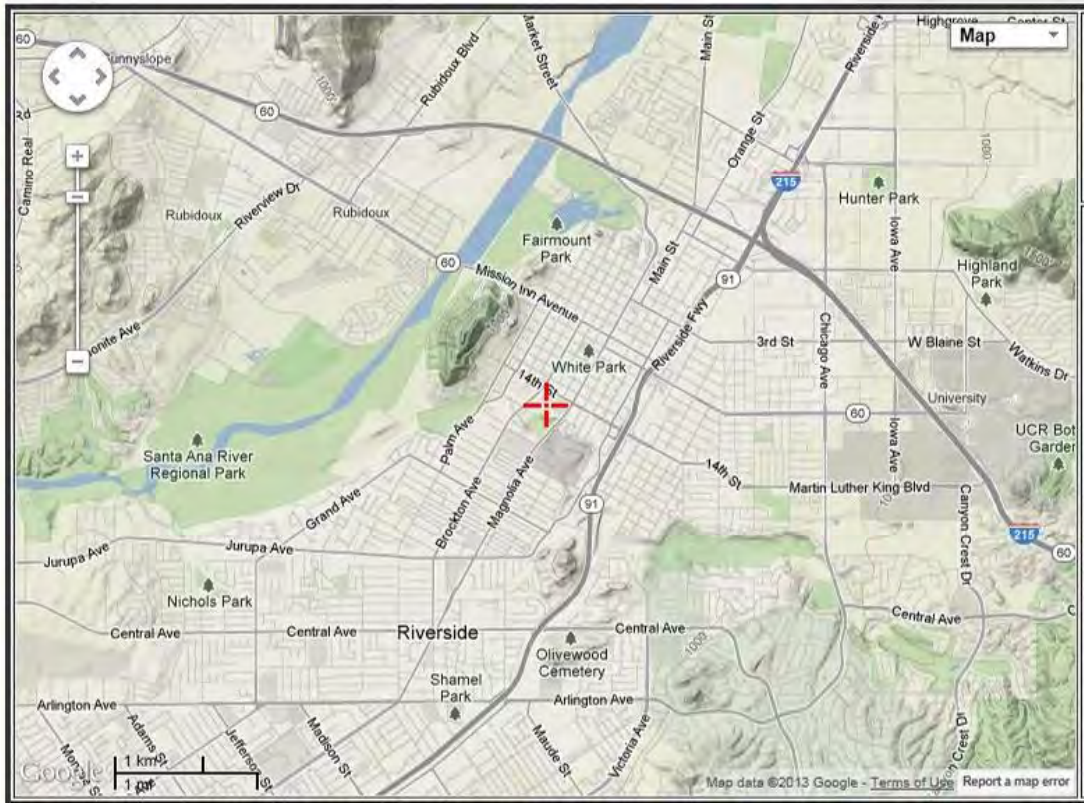
SELECT LOCATION

1. Manually:

a) Enter location (decimal degrees, use "-" for S and W): latitude: 33.9765 longitude: -117.3829 submit

b) Select station (click here for a list of stations used in frequency analysis for CA): select station

2. Use map:



a) Select location
(move crosshair or double click)

b) Click on station icon
(show stations on map)

LOCATION INFORMATION:
Name: Riverside, California, US*
Latitude: 33.9765
Longitude: -117.3829
Elevation: 803 ft*

* source: Google Maps

NOAA Atlas 14, Volume 6, Version 2
Location name: Riverside, California, US*
Coordinates: 33.9765, -117.3829
Elevation: 803ft*
* source: Google Maps

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.090 (0.075–0.109)	0.115 (0.096–0.140)	0.150 (0.125–0.182)	0.180 (0.148–0.220)	0.222 (0.177–0.282)	0.256 (0.199–0.332)	0.292 (0.222–0.388)	0.331 (0.244–0.453)	0.386 (0.273–0.552)	0.431 (0.294–0.639)
10-min	0.129 (0.107–0.156)	0.165 (0.138–0.200)	0.215 (0.179–0.262)	0.258 (0.212–0.316)	0.318 (0.253–0.404)	0.367 (0.286–0.476)	0.418 (0.318–0.557)	0.474 (0.349–0.649)	0.553 (0.391–0.791)	0.618 (0.421–0.916)
15-min	0.156 (0.130–0.188)	0.200 (0.167–0.242)	0.260 (0.216–0.316)	0.312 (0.257–0.382)	0.385 (0.306–0.488)	0.444 (0.345–0.575)	0.506 (0.384–0.673)	0.573 (0.423–0.785)	0.669 (0.472–0.957)	0.747 (0.509–1.11)
30-min	0.225 (0.188–0.272)	0.289 (0.241–0.350)	0.376 (0.312–0.457)	0.450 (0.371–0.552)	0.556 (0.442–0.705)	0.641 (0.499–0.832)	0.731 (0.555–0.973)	0.828 (0.611–1.14)	0.967 (0.683–1.38)	1.08 (0.736–1.60)
60-min	0.325 (0.271–0.393)	0.416 (0.347–0.505)	0.542 (0.451–0.659)	0.649 (0.535–0.796)	0.801 (0.638–1.02)	0.924 (0.720–1.20)	1.06 (0.801–1.40)	1.19 (0.881–1.64)	1.39 (0.984–1.99)	1.56 (1.06–2.31)
2-hr	0.467 (0.389–0.565)	0.595 (0.496–0.721)	0.766 (0.637–0.931)	0.908 (0.749–1.11)	1.11 (0.880–1.40)	1.26 (0.981–1.63)	1.42 (1.08–1.89)	1.59 (1.17–2.17)	1.82 (1.28–2.60)	2.00 (1.36–2.97)
3-hr	0.565 (0.471–0.683)	0.719 (0.600–0.872)	0.924 (0.768–1.12)	1.09 (0.901–1.34)	1.33 (1.05–1.68)	1.50 (1.17–1.95)	1.69 (1.28–2.25)	1.88 (1.39–2.58)	2.14 (1.51–3.07)	2.35 (1.60–3.48)
6-hr	0.775 (0.647–0.938)	0.993 (0.828–1.20)	1.28 (1.06–1.55)	1.51 (1.25–1.85)	1.83 (1.45–2.32)	2.07 (1.61–2.69)	2.32 (1.76–3.08)	2.57 (1.89–3.52)	2.91 (2.06–4.17)	3.18 (2.17–4.71)
12-hr	1.02 (0.848–1.23)	1.33 (1.11–1.61)	1.73 (1.44–2.10)	2.06 (1.70–2.52)	2.51 (1.99–3.18)	2.85 (2.22–3.69)	3.19 (2.43–4.25)	3.55 (2.62–4.86)	4.03 (2.85–5.77)	4.41 (3.00–6.53)
24-hr	1.34 (1.19–1.55)	1.79 (1.58–2.06)	2.37 (2.09–2.74)	2.85 (2.49–3.32)	3.50 (2.96–4.22)	4.00 (3.32–4.92)	4.51 (3.66–5.69)	5.04 (3.98–6.53)	5.76 (4.36–7.77)	6.33 (4.63–8.82)
2-day	1.66 (1.46–1.91)	2.24 (1.98–2.58)	3.00 (2.65–3.48)	3.63 (3.18–4.24)	4.50 (3.81–5.42)	5.17 (4.29–6.36)	5.85 (4.74–7.37)	6.56 (5.17–8.50)	7.54 (5.70–10.2)	8.30 (6.07–11.6)
3-day	1.80 (1.60–2.08)	2.46 (2.18–2.84)	3.34 (2.94–3.86)	4.06 (3.55–4.73)	5.05 (4.27–6.08)	5.82 (4.82–7.15)	6.61 (5.35–8.32)	7.43 (5.86–9.62)	8.56 (6.48–11.5)	9.44 (6.91–13.2)
4-day	1.95 (1.72–2.25)	2.68 (2.37–3.09)	3.65 (3.21–4.22)	4.45 (3.89–5.19)	5.55 (4.70–6.68)	6.40 (5.31–7.88)	7.29 (5.90–9.18)	8.20 (6.47–10.6)	9.46 (7.16–12.8)	10.5 (7.65–14.6)
7-day	2.26 (2.00–2.60)	3.12 (2.75–3.60)	4.26 (3.75–4.93)	5.20 (4.55–6.07)	6.50 (5.50–7.83)	7.51 (6.23–9.24)	8.55 (6.93–10.8)	9.64 (7.60–12.5)	11.1 (8.42–15.0)	12.3 (9.00–17.2)
10-day	2.45 (2.17–2.83)	3.40 (3.00–3.92)	4.65 (4.10–5.39)	5.69 (4.98–6.64)	7.13 (6.03–8.59)	8.25 (6.84–10.1)	9.40 (7.61–11.8)	10.6 (8.35–13.7)	12.3 (9.27–16.5)	13.6 (9.92–18.9)
20-day	3.01 (2.66–3.47)	4.19 (3.70–4.83)	5.77 (5.08–6.67)	7.08 (6.19–8.26)	8.91 (7.55–10.7)	10.4 (8.59–12.7)	11.9 (9.60–14.9)	13.4 (10.6–17.4)	15.6 (11.8–21.0)	17.3 (12.7–24.2)
30-day	3.57 (3.16–4.11)	4.95 (4.38–5.72)	6.83 (6.02–7.91)	8.41 (7.35–9.81)	10.6 (8.99–12.8)	12.4 (10.3–15.2)	14.2 (11.5–17.9)	16.1 (12.7–20.9)	18.9 (14.3–25.4)	21.0 (15.4–29.3)
45-day	4.24 (3.75–4.89)	5.85 (5.17–6.75)	8.05 (7.10–9.32)	9.91 (8.67–11.6)	12.5 (10.6–15.1)	14.7 (12.2–18.0)	16.9 (13.7–21.3)	19.3 (15.2–24.9)	22.6 (17.1–30.5)	25.3 (18.5–35.3)
60-day	4.92 (4.35–5.67)	6.73 (5.95–7.77)	9.21 (8.12–10.7)	11.3 (9.91–13.2)	14.3 (12.1–17.3)	16.8 (13.9–20.6)	19.4 (15.7–24.4)	22.1 (17.4–28.7)	26.1 (19.7–35.2)	29.3 (21.4–40.8)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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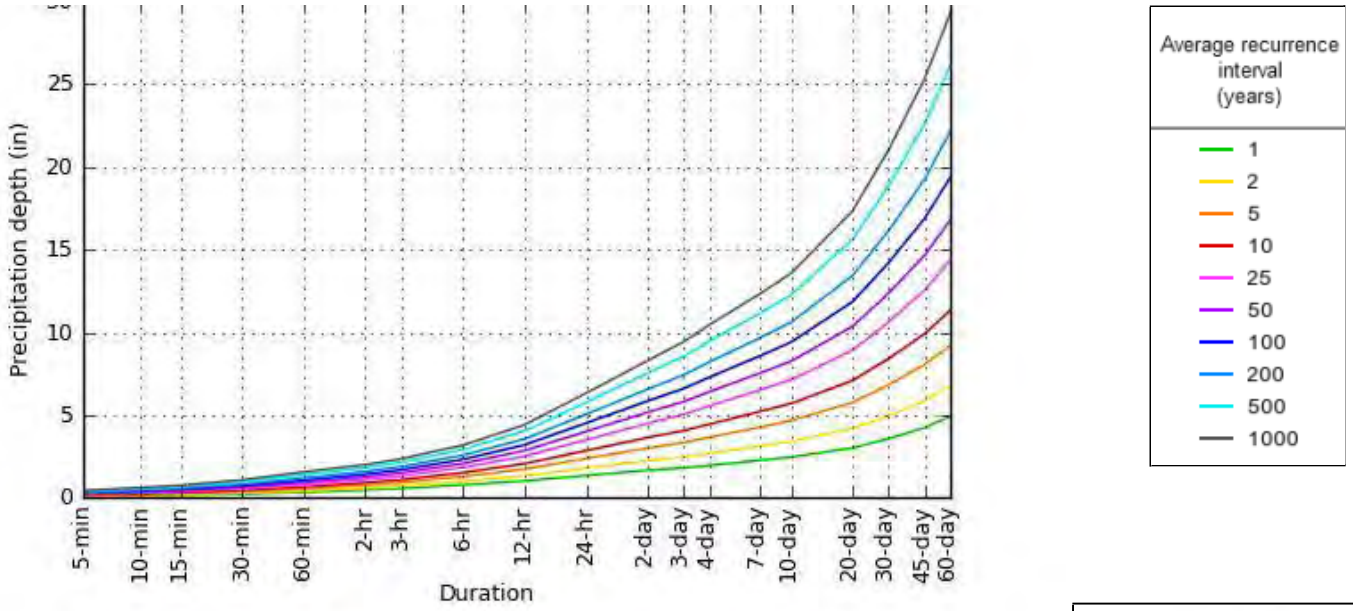
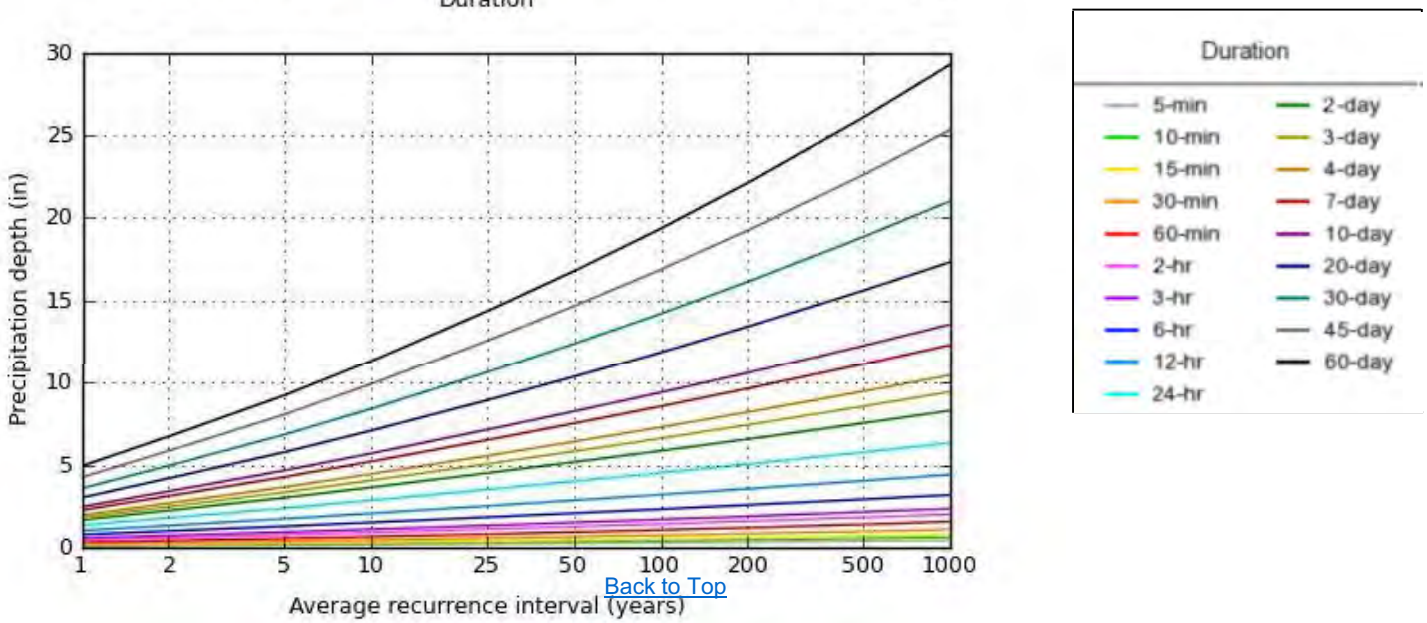
PF graphical





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Maps & aerials

NOAA/NWS/OHD/HDSC

Created (GMT): Thu May 2 16:30:58 2013

Small scale terrain

LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC & WCD

HYDROLOGY MANUAL

N

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR RIVERSIDE—WEST

PLATE C-1.15

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Western Riverside Area, California

April 30, 2013

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Gully

Short Steep Slope

Other

Political Features

Cities

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

Map Scale: 1:3,560 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 5, Jan 3, 2008

Date(s) aerial images were photographed: 6/7/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Western Riverside Area, California (CA679)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
AoD	Arlington fine sandy loam, deep, 8 to 15 percent slopes	2.0	6.9%
ArB	Arlington loam, deep, 0 to 5 percent slopes	12.8	44.3%
Cf	Chino silt loam, drained, saline-alkali	8.6	29.5%
HcD2	Hanford coarse sandy loam, 8 to 15 percent slopes, erod ed	2.2	7.4%
TeG	Terrace escarpments	3.5	11.9%
Totals for Area of Interest		**29.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic

classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Western Riverside Area, California

AoD—Arlington fine sandy loam, deep, 8 to 15 percent slopes

Map Unit Setting

Elevation: 400 to 2,000 feet
Mean annual precipitation: 12 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 240 to 320 days

Map Unit Composition

Arlington and similar soils: 85 percent
Minor components: 15 percent

Description of Arlington

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 40 to 60 inches to duripan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 7.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: LOAMY (R019XD029CA)

Typical profile

0 to 11 inches: Fine sandy loam
11 to 50 inches: Sandy loam
50 to 60 inches: Cemented
60 to 70 inches: Coarse sandy loam, loamy coarse sand

Minor Components

Greenfield

Percent of map unit: 5 percent

Hanford

Percent of map unit: 5 percent

Ramona

Percent of map unit: 5 percent

ArB—Arlington loam, deep, 0 to 5 percent slopes

Map Unit Setting

Elevation: 400 to 2,000 feet
Mean annual precipitation: 12 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 240 to 320 days

Map Unit Composition

Arlington and similar soils: 85 percent
Minor components: 15 percent

Description of Arlington

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 40 to 60 inches to duripan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 7.5 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 2e
Land capability (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: LOAMY (R019XD029CA)

Typical profile

0 to 11 inches: Loam
11 to 50 inches: Sandy loam
50 to 60 inches: Cemented
60 to 70 inches: Coarse sandy loam, loamy coarse sand

Minor Components

Ramona
Percent of map unit: 5 percent

Greenfield
Percent of map unit: 5 percent

Hanford
Percent of map unit: 5 percent

Cf—Chino silt loam, drained, saline-alkali

Map Unit Setting
Elevation: 3,100 feet
Mean annual precipitation: 8 to 20 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 230 to 340 days

Map Unit Composition
Chino and similar soils: 85 percent
Minor components: 15 percent

Description of Chino

Setting
Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Moderately saline (16.0 mmhos/cm)
Available water capacity: Low (about 4.2 inches)

Interpretive groups
Farmland classification: Farmland of statewide importance
Land capability classification (irrigated): 3w
Land capability (nonirrigated): 4w
Hydrologic Soil Group: B
Ecological site: SILTY BASIN (R019XD068CA)

Typical profile

0 to 14 inches: Silt loam
14 to 27 inches: Silty clay loam
27 to 60 inches: Silty clay loam

Minor Components

Chino

Percent of map unit: 5 percent

Unnamed

Percent of map unit: 5 percent

Unnamed

Percent of map unit: 3 percent

Unnamed

Percent of map unit: 2 percent

HcD2—Hanford coarse sandy loam, 8 to 15 percent slopes, erod ed

Map Unit Setting

Elevation: 150 to 900 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 63 to 64 degrees F
Frost-free period: 250 to 280 days

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent

Description of Hanford

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.0 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance

Land capability classification (irrigated): 3e
Land capability (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: SANDY (R020XD012CA)

Typical profile

0 to 8 inches: Coarse sandy loam
8 to 40 inches: Fine sandy loam
40 to 60 inches: Stratified loamy sand to coarse sandy loam

Minor Components

Tujunga

Percent of map unit: 5 percent

Greenfield

Percent of map unit: 5 percent

Ramona

Percent of map unit: 5 percent

TeG—Terrace escarpments

Map Unit Composition

Terrace escarpments: 100 percent

Description of Terrace Escarpments

Setting

Landform: Terraces
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from mixed sources

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7e
Ecological site: SHALLOW LOAMY (R019XD060CA)

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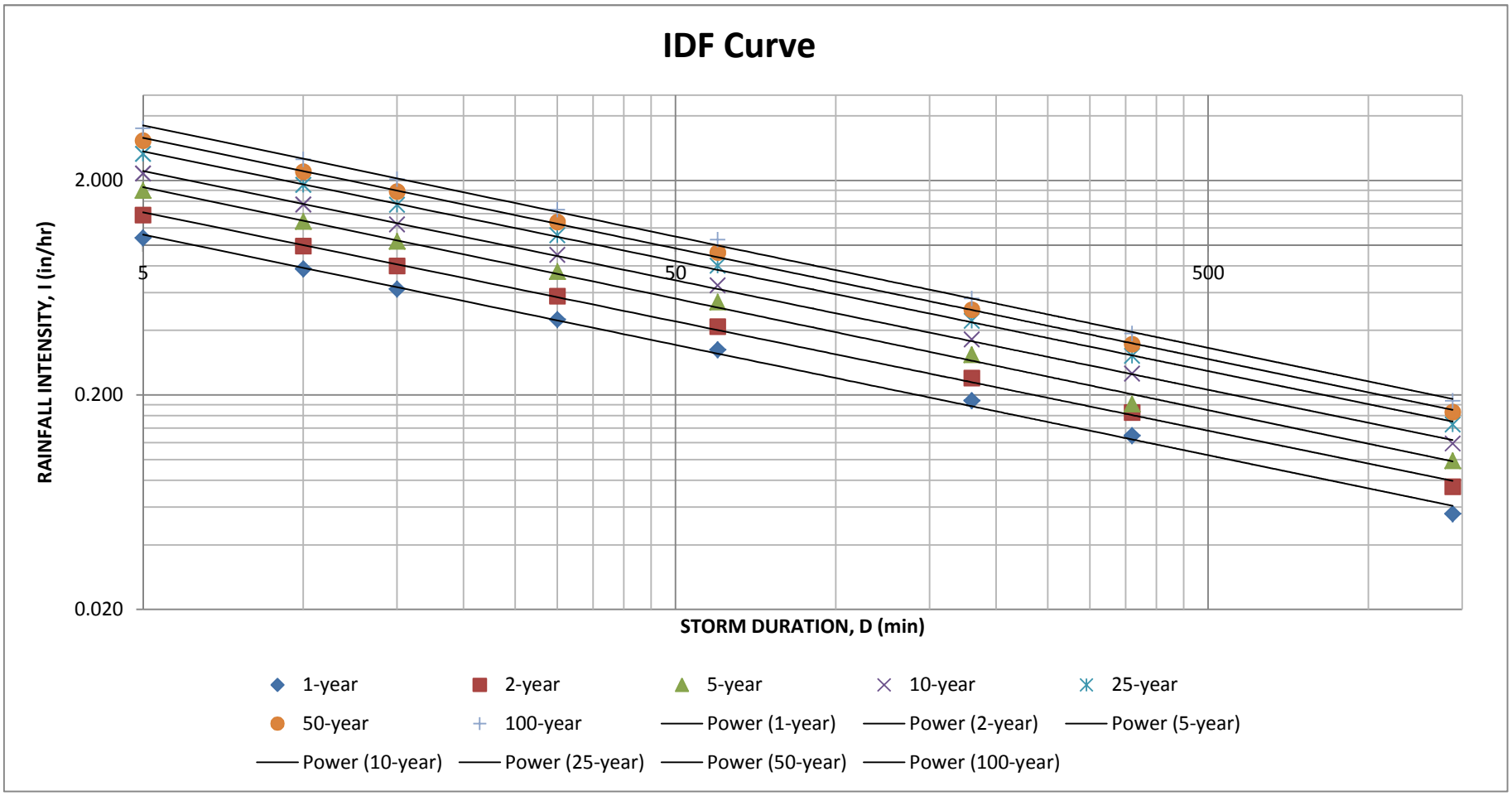
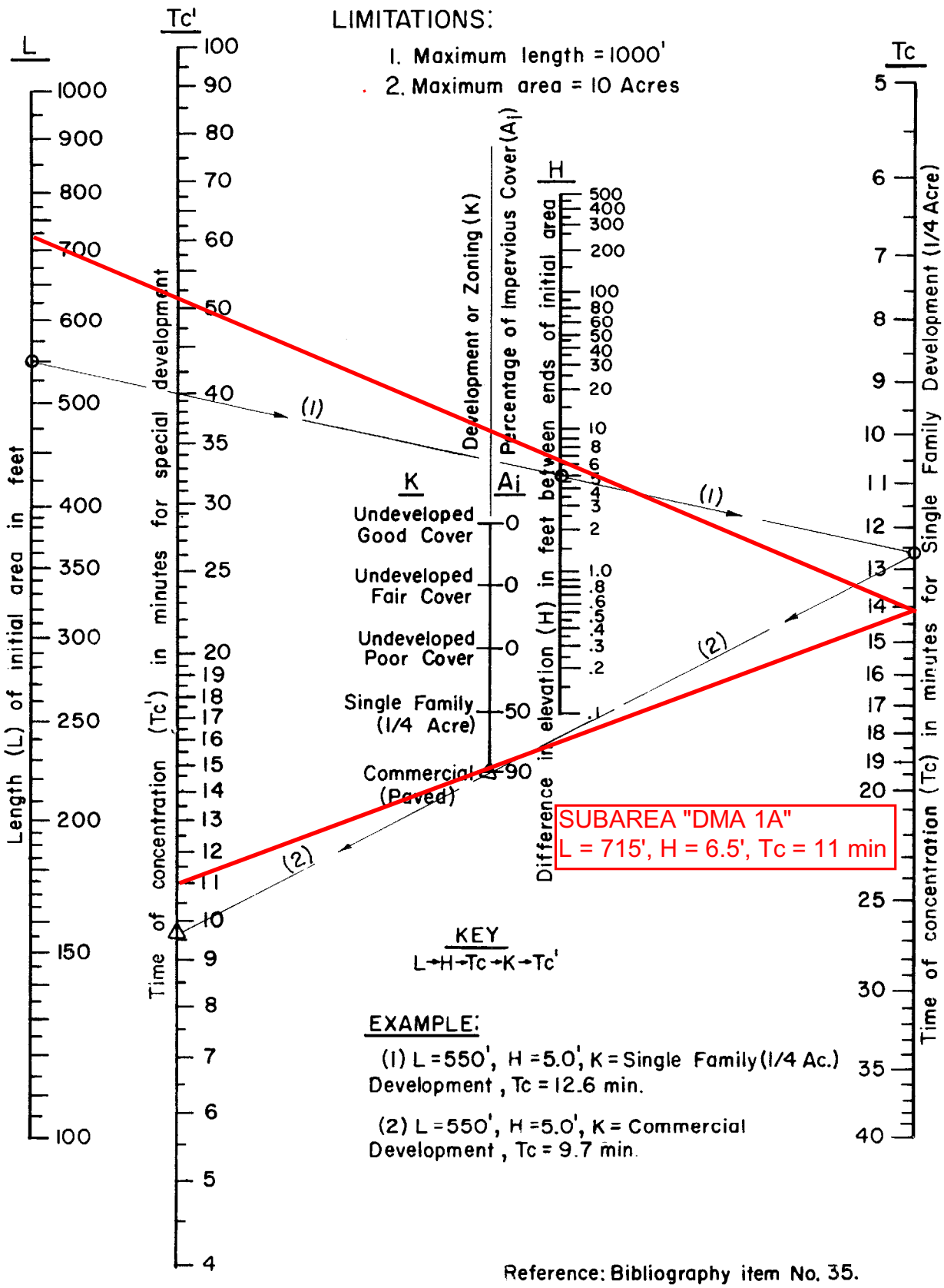
Kimley-Horn and Associates, Inc.

Date: 5/2/2013
Project: Riverside Community Hospital
Project #: 095680007
Locality: City of Riverside
Latitude: 33.9765
Longitude: -117.3829
Storm: 10-year P = 0.649 (1-hour)
m = -0.510
k = 5.243 k = P / (60 min ^ m)

Rainfall Intensity Table									
I (in/hr)	**D (min)**	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**	**10-year**
5-min:	**5**	1.080	1.380	1.800	2.160	2.664	3.072	3.504	2.160
10-min:	**10**	0.774	0.990	1.290	1.548	1.908	2.202	2.508	1.548
15-min:	**15**	0.624	0.800	1.040	1.248	1.540	1.776	2.024	1.248
30-min:	**30**	0.450	0.578	0.752	0.900	1.112	1.282	1.462	0.900
60-min:	**60**	0.325	0.416	0.542	0.649	0.801	0.924	1.060	0.649
3-hr:	**180**	0.188	0.240	0.308	0.363	0.443	0.500	0.563	0.363
6-hr:	**360**	0.129	0.166	0.182	0.252	0.305	0.345	0.387	0.252
24-hr:	**1440**	0.056	0.075	0.099	0.119	0.146	0.167	0.188	0.119

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)





Reference: Bibliography item No. 35.

RCFC & WCD

HYDROLOGY MANUAL

TIME OF CONCENTRATION FOR INITIAL SUBAREA

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparrel, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	72	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	28	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
AGRICULTURAL COVERS -					
Fallow (Land plowed but not tilled or seeded)		76	85	90	92

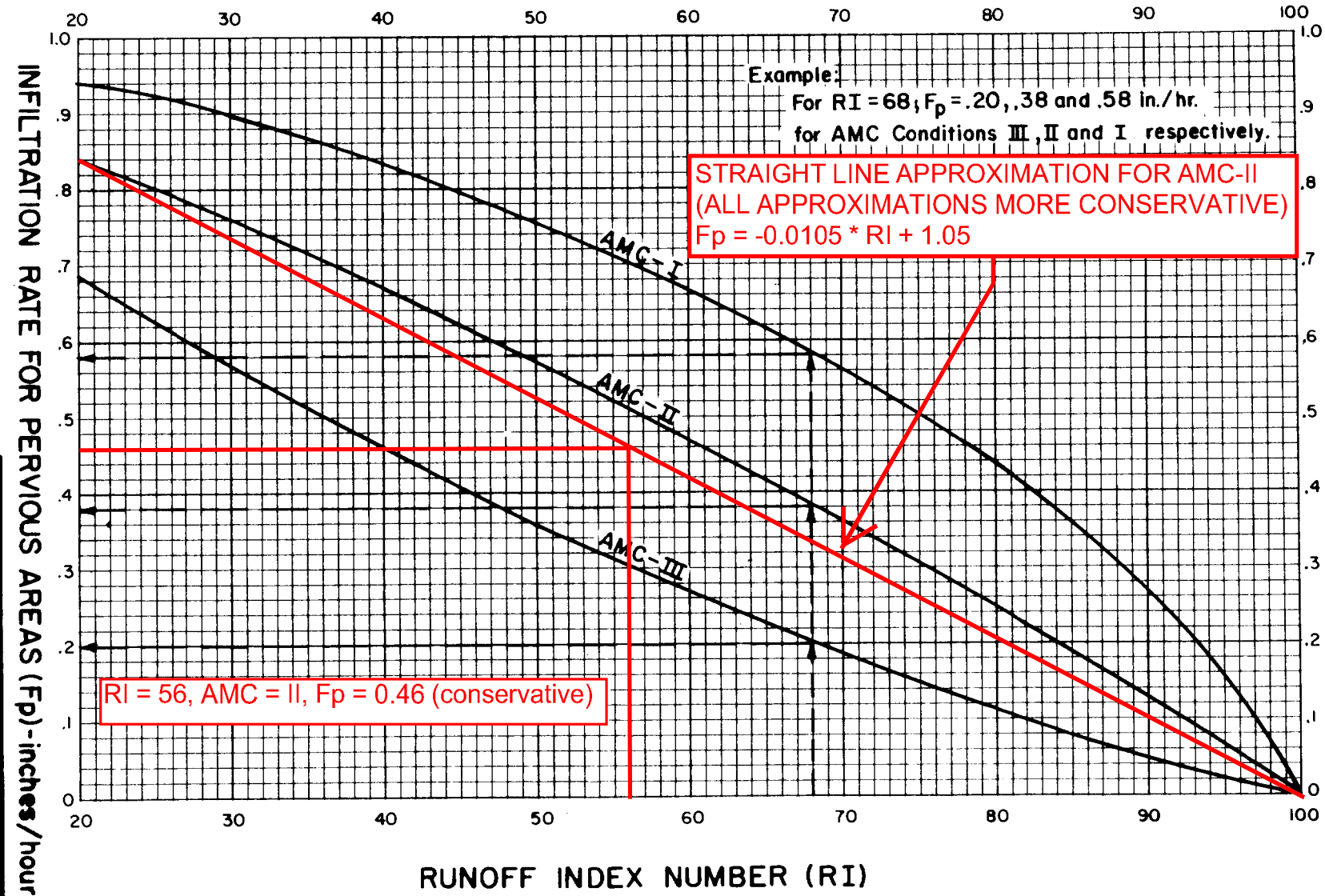
RCFC & WCD

HYDROLOGY MANUAL

RUNOFF INDEX NUMBERS FOR PERVIOUS AREA

NOTES:

1. R.I. Number-Infiltration relationships are derived from rainfall-runoff relationships in Bibliography item No. 36.

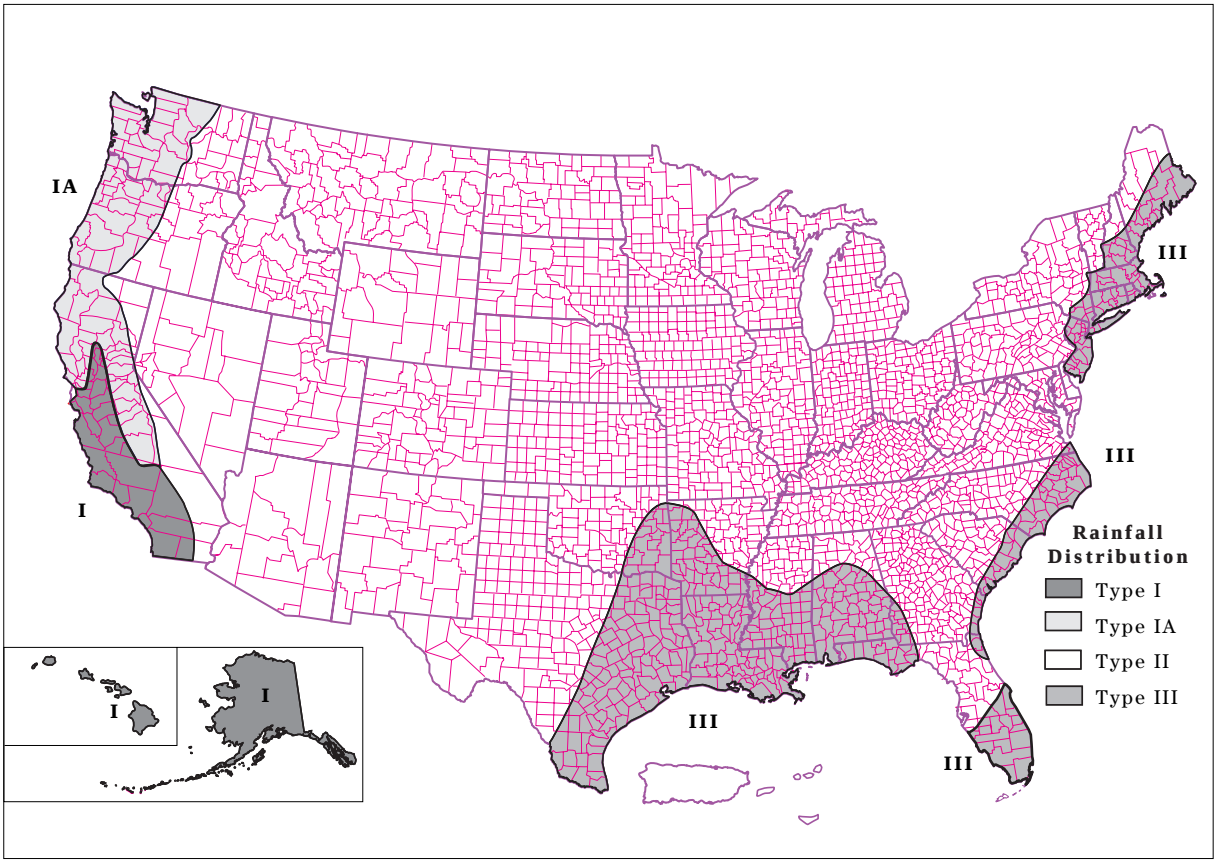


RCFC & WCD

HYDROLOGY MANUAL

INFILTRATION RATE FOR PERVIOUS AREAS VERSUS RUNOFF INDEX NUMBERS

Figure B-2 Approximate geographic boundaries for NRCS (SCS) rainfall distributions



Rainfall data sources

This section lists the most current 24-hour rainfall data published by the National Weather Service (NWS) for various parts of the country. Because NWS Technical Paper 40 (TP-40) is out of print, the 24-hour rainfall maps for areas east of the 105th meridian are included here as figures B-3 through B-8. For the area generally west of the 105th meridian, TP-40 has been superseded by NOAA Atlas 2, the Precipitation-Frequency Atlas of the Western United States, published by the National Ocean and Atmospheric Administration.

East of 105th meridian

Hershfield, D.M. 1961. Rainfall frequency atlas of the United States for durations from 30 minutes to 24 hours and return periods from 1 to 100 years. U.S. Dept. Commerce, Weather Bur. Tech. Pap. No. 40. Washington, DC. 155 p.

West of 105th meridian

Miller, J.F., R.H. Frederick, and R.J. Tracey. 1973. Precipitation-frequency atlas of the Western United States. Vol. I Montana; Vol. II, Wyoming; Vol III, Colorado; Vol. IV, New Mexico; Vol V, Idaho; Vol. VI, Utah; Vol. VII, Nevada; Vol. VIII, Arizona; Vol. IX, Washington; Vol. X, Oregon; Vol. XI, California. U.S. Dept. of Commerce, National Weather Service, NOAA Atlas 2. Silver Spring, MD.

Alaska

Miller, John F. 1963. Probable maximum precipitation and rainfall-frequency data for Alaska for areas to 400 square miles, durations to 24 hours and return periods from 1 to 100 years. U.S. Dept. of Commerce, Weather Bur. Tech. Pap. No. 47. Washington, DC. 69 p.

Hawaii

Weather Bureau. 1962. Rainfall-frequency atlas of the Hawaiian Islands for areas to 200 square miles, durations to 24 hours and return periods from 1 to 100 years. U.S. Dept. Commerce, Weather Bur. Tech. Pap. No. 43. Washington, DC. 60 p.

Puerto Rico and Virgin Islands

Weather Bureau. 1961. Generalized estimates of probable maximum precipitation and rainfall-frequency data for Puerto Rico and Virgin Islands for areas to 400 square miles, durations to 24 hours, and return periods from 1 to 100 years. U.S. Dept. Commerce, Weather Bur. Tech. Pap. No. 42. Washington, DC. 94 P.

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Latitude: 33.9765
Longitude: -117.3829

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

			Drainage Area Data					SCS / TR-55 Graphical Peak Discharge Method Runoff Volume and Peak Flow Calculations for Type I, 24-hour Storm Event													
Storm Event	Outfall #	Scenario	Total Area (ac.)	Impv. Area (ac.) CN = 98	Pervious Area (ac.) CN = 56	Curve Number (CN)	Time of Conc. (min)	S (in)	Ia (in)	Ia/P	qu (csm/in)	Table F-1 C_0	Table F-1 C_1	Table F-1 C_2	Rainfall Depth P (in)	Runoff Depth Q (in)	Runoff Volume V (cu ft)	Δ Runoff Volume	Peak Flow q (cfs)	Δ Peak Flow
2-year	1	Predevelopment	14.36	10.83	3.53	88	13.3	1.407	0.281	0.157	358.4	2.2655	-0.5084	-0.1014	1.79	0.78	40,691		6.28	
2-year	1	Post-development Phase 1	14.36	10.98	3.38	88	13.3	1.348	0.270	0.151	362.2	2.2704	-0.5091	-0.1034	1.79	0.81	41,993	3.2%	6.55	4.3%
2-year	1	Post-development Phase 2	14.36	10.98	3.38	88	13.3	1.348	0.270	0.151	362.2	2.2704	-0.5091	-0.1034	1.79	0.81	41,993	3.2%	6.55	4.3%
10-year	1	Predevelopment	14.36	10.83	3.53	88	13.3	1.407	0.281	0.099	390.3	2.3055	-0.5143	-0.1175	2.85	1.66	86,505		14.53	
10-year	1	Post-development Phase 1	14.36	10.98	3.38	88	13.3	1.348	0.270	0.095	390.3	2.3055	-0.5143	-0.1175	2.85	1.69	88,326	2.1%	14.84	2.1%
10-year	1	Post-development Phase 2	14.36	10.98	3.38	88	13.3	1.348	0.270	0.095	390.3	2.3055	-0.5143	-0.1175	2.85	1.69	88,326	2.1%	14.84	2.1%
100-year	1	Predevelopment	14.36	10.83	3.53	88	13.3	1.407	0.281	0.062	390.3	2.3055	-0.5143	-0.1175	4.51	3.17	165,379		27.78	
100-year	1	Post-development Phase 1	14.36	10.98	3.38	88	13.3	1.348	0.270	0.060	390.3	2.3055	-0.5143	-0.1175	4.51	3.22	167,678	1.4%	28.17	1.4%
100-year	1	Post-development Phase 2	14.36	10.98	3.38	88	13.3	1.348	0.270	0.060	390.3	2.3055	-0.5143	-0.1175	4.51	3.22	167,678	1.4%	28.17	1.4%
2-year	2	Predevelopment	3.81	3.33	0.47	93	5.0	0.779	0.156	0.087	529.3	2.3055	-0.5143	-0.1175	1.79	1.11	15,297		3.48	
2-year	2	Post-development Phase 1	3.81	3.33	0.47	93	5.0	0.779	0.156	0.087	529.3	2.3055	-0.5143	-0.1175	1.79	1.11	15,297	0.0%	3.48	0.0%
2-year	2	Post-development Phase 2	3.81	2.49	1.31	84	5.0	1.973	0.395	0.220	453.5	2.2141	-0.4963	-0.0799	1.79	0.58	7,987	-47.8%	1.56	-55.3%
10-year	2	Predevelopment	3.81	3.33	0.47	93	5.0	0.779	0.156	0.055	529.3	2.3055	-0.5143	-0.1175	2.85	2.09	28,885		6.58	
10-year	2	Post-development Phase 1	3.81	3.33	0.47	93	5.0	0.779	0.156	0.055	529.3	2.3055	-0.5143	-0.1175	2.85	2.09	28,885	0.0%	6.58	0.0%
10-year	2	Post-development Phase 2	3.81	2.49	1.31	84	5.0	1.973	0.395	0.138	507.3	2.2789	-0.5103	-0.1068	2.85	1.36	18,811	-34.9%	4.11	-37.6%
100-year	2	Predevelopment	3.81	3.33	0.47	93	5.0	0.779	0.156	0.035	529.3	2.3055	-0.5143	-0.1175	4.51	3.69	51,043		11.63	
100-year	2	Post-development Phase 1	3.81	3.33	0.47	93	5.0	0.779	0.156	0.035	529.3	2.3055	-0.5143	-0.1175	4.51	3.69	51,043	0.0%	11.63	0.0%
100-year	2	Post-development Phase 2	3.81	2.49	1.31	84	5.0	1.973	0.395	0.088	529.3	2.3055	-0.5143	-0.1175	4.51	2.78	38,437	-24.7%	8.76	-24.7%
2-year	3	All Phases (No Changes Expected)	3.51	2.96	0.56	91	5.0	0.948	0.190	0.106	526.3	2.3020	-0.5138	-0.1161	1.79	1.00	12,819		2.90	
10-year	3	All Phases (No Changes Expected)	3.51	2.96	0.56	91	5.0	0.948	0.190	0.067	529.3	2.3055	-0.5143	-0.1175	2.85	1.96	25,019		5.70	
100-year	3	All Phases (No Changes Expected)	3.51	2.96	0.56	91	5.0	0.948	0.190	0.042	529.3	2.3055	-0.5143	-0.1175	4.51	3.54	45,193		10.30	
2-year	4	All Phases (No Changes Expected)	0.46	0.02	0.43	58	5.0	7.176	1.435	0.802	56.7	1.6789	-0.0693	0.0000	1.79	0.02	28		0.00	
10-year	4	All Phases (No Changes Expected)	0.46	0.02	0.43	58	5.0	7.176	1.435	0.504	56.7	1.6789	-0.0693	0.0000	2.85	0.23	386		0.01	
100-year	4	All Phases (No Changes Expected)	0.46	0.02	0.43	58	5.0	7.176	1.435	0.318	339.0	2.0691	-0.4392	-0.0110	4.51	0.92	1,527		0.22	
2-year	5	All Phases (No Changes Expected)	2.82	2.32	0.49	91	5.0	1.031	0.206	0.115	520.5	2.2950	-0.5127	-0.1133	1.79	0.96	9,811		2.20	
10-year	5	All Phases (No Changes Expected)	2.82	2.32	0.49	91	5.0	1.031	0.206	0.072	529.3	2.3055	-0.5143	-0.1175	2.85	1.90	19,451		4.43	
100-year	5	All Phases (No Changes Expected)	2.82	2.32	0.49	91	5.0	1.031	0.206	0.046	529.3	2.3055	-0.5143	-0.1175	4.51	3.47	35,506		8.09	

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Phase: Predevelopment
Latitude: 33.9765
Longitude: -117.3829
Storm: 10-year P = 0.649 (1-hour)
m = -0.510
k = 5.243 k = P / (60 min ^ m)

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)	HSG	RI	AMC	F_P (in/hr)	F (in/hr)	Tc (min)	I* (in/hr)	C	Q (cfs)
1A	20	8.66	7.53	1.14	B	56	AMC-II	0.46	0.10	11.0	1.54	0.86	11.55
1B	19	0.20	0.15	0.05	B	56	AMC-II	0.46	0.16	5.0	2.31	0.85	0.39
1C	14	0.21	0.02	0.19	B	56	AMC-II	0.46	0.42	5.0	2.31	0.74	0.36
1D	12	2.02	0.82	1.20	B	56	AMC-II	0.46	0.29	5.0	2.31	0.79	3.69
1E	17	0.75	0.48	0.28	B	56	AMC-II	0.46	0.20	5.0	2.31	0.83	1.45
1F	9	0.70	0.02	0.68	B	56	AMC-II	0.46	0.45	5.0	2.31	0.72	1.17
1G	4	1.82	1.82	0.00	B	56	AMC-II	0.46	0.05	5.0	2.31	0.90	3.77
1 TOTAL	EXISTING	14.36	10.83	3.53	B	56	AMC-II	0.46	0.15	13.3	1.40	0.83	16.60
2	EXISTING	3.81	3.33	0.47	B	56	AMC-II	0.46	0.10	5.0	2.31	0.88	7.70
3	EXISTING	3.51	2.96	0.56	B	56	AMC-II	0.46	0.11	5.0	2.31	0.87	7.06
4	EXISTING	0.46	0.02	0.43	B	56	AMC-II	0.46	0.44	5.0	2.31	0.73	0.77
5	EXISTING	2.82	2.32	0.49	B	56	AMC-II	0.46	0.12	5.0	2.31	0.87	5.64

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Phase: Post-development Phase 1
Latitude: 33.9765
Longitude: -117.3829
Storm: 10-year P = 0.649 (1-hour)
m = -0.510
k = 5.243 k = P / (60 min ^ m)

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)	HSG	RI	AMC	F_P (in/hr)	F (in/hr)	Tc (min)	I* (in/hr)	C	Q (cfs)
1A	20	8.66	7.68	0.98	B	56	AMC-II	0.46	0.09	11.0	1.54	0.87	11.61
1B	19	0.20	0.15	0.05	B	56	AMC-II	0.46	0.16	5.0	2.31	0.85	0.39
1C	14	0.21	0.02	0.19	B	56	AMC-II	0.46	0.42	5.0	2.31	0.74	0.36
1D	12	2.02	0.82	1.20	B	56	AMC-II	0.46	0.29	5.0	2.31	0.79	3.69
1E	17	0.75	0.48	0.28	B	56	AMC-II	0.46	0.20	5.0	2.31	0.83	1.45
1F	9	0.70	0.02	0.68	B	56	AMC-II	0.46	0.45	5.0	2.31	0.72	1.17
1G	4	1.82	1.82	0.00	B	56	AMC-II	0.46	0.05	5.0	2.31	0.90	3.77
1 TOTAL	EXISTING	14.36	10.98	3.38	B	56	AMC-II	0.46	0.14	13.3	1.40	0.83	16.67
2	EXISTING	3.81	3.33	0.47	B	56	AMC-II	0.46	0.10	5.0	2.31	0.88	7.70
3	EXISTING	3.51	2.96	0.56	B	56	AMC-II	0.46	0.11	5.0	2.31	0.87	7.06
4	EXISTING	0.46	0.02	0.43	B	56	AMC-II	0.46	0.44	5.0	2.31	0.73	0.77
5	EXISTING	2.82	2.32	0.49	B	56	AMC-II	0.46	0.12	5.0	2.31	0.87	5.64

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Phase: Post-development Phase 2
Latitude: 33.9765
Longitude: -117.3829
Storm: 10-year P = 0.649 (1-hour)
m = -0.510
k = 5.243 k = P / (60 min ^ m)

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)	HSG	RI	AMC	F_P (in/hr)	F (in/hr)	Tc (min)	I* (in/hr)	C	Q (cfs)
1A	20	8.66	7.68	0.98	B	56	AMC-II	0.46	0.09	11.0	1.54	0.87	11.61
1B	19	0.20	0.15	0.05	B	56	AMC-II	0.46	0.16	5.0	2.31	0.85	0.39
1C	14	0.21	0.02	0.19	B	56	AMC-II	0.46	0.42	5.0	2.31	0.74	0.36
1D	12	2.02	0.82	1.20	B	56	AMC-II	0.46	0.29	5.0	2.31	0.79	3.69
1E	17	0.75	0.48	0.28	B	56	AMC-II	0.46	0.20	5.0	2.31	0.83	1.45
1F	9	0.70	0.02	0.68	B	56	AMC-II	0.46	0.45	5.0	2.31	0.72	1.17
1G	4	1.82	1.82	0.00	B	56	AMC-II	0.46	0.05	5.0	2.31	0.90	3.77
1 TOTAL	EXISTING	14.36	10.98	3.38	B	56	AMC-II	0.46	0.14	13.3	1.40	0.83	16.67
2	EXISTING	3.81	2.49	1.31	B	56	AMC-II	0.46	0.19	5.0	2.31	0.84	7.36
3	EXISTING	3.51	2.96	0.56	B	56	AMC-II	0.46	0.11	5.0	2.31	0.87	7.06
4	EXISTING	0.46	0.02	0.43	B	56	AMC-II	0.46	0.44	5.0	2.31	0.73	0.77
5	EXISTING	2.82	2.32	0.49	B	56	AMC-II	0.46	0.12	5.0	2.31	0.87	5.64

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Phase: Predevelopment
Latitude: 33.9765
Longitude: -117.3829
Storm: 100-year P = 1.06 (1-hour)
m = -0.510
k = 8.563 k = P / (60 min ^ m)

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)	HSG	RI	AMC	F_P (in/hr)	F (in/hr)	Tc (min)	I* (in/hr)	C	Q (cfs)
1A	20	8.66	7.53	1.14	B	56	AMC-II	0.46	0.10	11.0	2.52	0.88	19.16
1B	19	0.20	0.15	0.05	B	56	AMC-II	0.46	0.16	5.0	3.77	0.87	0.66
1C	14	0.21	0.02	0.19	B	56	AMC-II	0.46	0.42	5.0	3.77	0.80	0.63
1D	12	2.02	0.82	1.20	B	56	AMC-II	0.46	0.29	5.0	3.77	0.83	6.35
1E	17	0.75	0.48	0.28	B	56	AMC-II	0.46	0.20	5.0	3.77	0.86	2.44
1F	9	0.70	0.02	0.68	B	56	AMC-II	0.46	0.45	5.0	3.77	0.79	2.08
1G	4	1.82	1.82	0.00	B	56	AMC-II	0.46	0.05	5.0	3.77	0.90	6.16
1 TOTAL	EXISTING	14.36	10.83	3.53	B	56	AMC-II	0.46	0.15	13.1	2.30	0.86	28.28
2	EXISTING	3.81	3.33	0.47	B	56	AMC-II	0.46	0.10	5.0	3.77	0.89	12.71
3	EXISTING	3.51	2.96	0.56	B	56	AMC-II	0.46	0.11	5.0	3.77	0.88	11.68
4	EXISTING	0.46	0.02	0.43	B	56	AMC-II	0.46	0.44	5.0	3.77	0.80	1.37
5	EXISTING	2.82	2.32	0.49	B	56	AMC-II	0.46	0.12	5.0	3.77	0.88	9.35

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Phase: Post-development Phase 1
Latitude: 33.9765
Longitude: -117.3829
Storm: 100-year P = 1.06 (1-hour)
m = -0.510
k = 8.563 k = P / (60 min ^ m)

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)	HSG	RI	AMC	F_P (in/hr)	F (in/hr)	Tc (min)	I* (in/hr)	C	Q (cfs)
1A	20	8.66	7.68	0.98	B	56	AMC-II	0.46	0.09	11.0	2.52	0.88	19.23
1B	19	0.20	0.15	0.05	B	56	AMC-II	0.46	0.16	5.0	3.77	0.87	0.66
1C	14	0.21	0.02	0.19	B	56	AMC-II	0.46	0.42	5.0	3.77	0.80	0.63
1D	12	2.02	0.82	1.20	B	56	AMC-II	0.46	0.29	5.0	3.77	0.83	6.35
1E	17	0.75	0.48	0.28	B	56	AMC-II	0.46	0.20	5.0	3.77	0.86	2.44
1F	9	0.70	0.02	0.68	B	56	AMC-II	0.46	0.45	5.0	3.77	0.79	2.08
1G	4	1.82	1.82	0.00	B	56	AMC-II	0.46	0.05	5.0	3.77	0.90	6.16
1 TOTAL	EXISTING	14.36	10.98	3.38	B	56	AMC-II	0.46	0.14	13.1	2.30	0.86	28.35
2	EXISTING	3.81	3.33	0.47	B	56	AMC-II	0.46	0.10	5.0	3.77	0.89	12.71
3	EXISTING	3.51	2.96	0.56	B	56	AMC-II	0.46	0.11	5.0	3.77	0.88	11.68
4	EXISTING	0.46	0.02	0.43	B	56	AMC-II	0.46	0.44	5.0	3.77	0.80	1.37
5	EXISTING	2.82	2.32	0.49	B	56	AMC-II	0.46	0.12	5.0	3.77	0.88	9.35

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Phase: Post-development Phase 2
Latitude: 33.9765
Longitude: -117.3829
Storm: 10-year P = 0.649 (1-hour)
m = -0.510
k = 5.243 k = P / (60 min ^ m)

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)

DMA	INLET	TOTAL AREA (ac.)	IMPV. AREA (ac.)	PERV. AREA (ac.)	HSG	RI	AMC	F_P (in/hr)	F (in/hr)	Tc (min)	I* (in/hr)	C	Q (cfs)
1A	20	8.66	7.68	0.98	B	56	AMC-II	0.46	0.09	11.0	1.54	0.87	11.61
1B	19	0.20	0.15	0.05	B	56	AMC-II	0.46	0.16	5.0	2.31	0.85	0.39
1C	14	0.21	0.02	0.19	B	56	AMC-II	0.46	0.42	5.0	2.31	0.74	0.36
1D	12	2.02	0.82	1.20	B	56	AMC-II	0.46	0.29	5.0	2.31	0.79	3.69
1E	17	0.75	0.48	0.28	B	56	AMC-II	0.46	0.20	5.0	2.31	0.83	1.45
1F	9	0.70	0.02	0.68	B	56	AMC-II	0.46	0.45	5.0	2.31	0.72	1.17
1G	4	1.82	1.82	0.00	B	56	AMC-II	0.46	0.05	5.0	2.31	0.90	3.77
1 TOTAL	EXISTING	14.36	10.98	3.38	B	56	AMC-II	0.46	0.14	13.1	1.41	0.83	16.81
2	EXISTING	3.81	2.49	1.31	B	56	AMC-II	0.46	0.19	5.0	2.31	0.84	7.36
3	EXISTING	3.51	2.96	0.56	B	56	AMC-II	0.46	0.11	5.0	2.31	0.87	7.06
4	EXISTING	0.46	0.02	0.43	B	56	AMC-II	0.46	0.44	5.0	2.31	0.73	0.77
5	EXISTING	2.82	2.32	0.49	B	56	AMC-II	0.46	0.12	5.0	2.31	0.87	5.64

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Locality: City of Riverside
Latitude: 33.9765
Longitude: -117.3829
Storm: 10-year P = 0.649 (1-hour)
m = -0.510 (slope of IDF curve)
k = 5.243 k = P / (60 min ^ m)
n = 0.011 (Manning roughness coefficient)

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)

FROM POINT	TO POINT	LAT. #	LENGTH	SIZE	INVERT ELEVATIONS		SLOPE	PIPE CAPACITY	TOTAL AREA		IMPV. AREA		PERV. AREA		FROM CONTRIBUTING DRAINAGE AREA AND SURFACE RUNOFF								
					UP	DN			EA.	Σ	EA.	Σ	EA.	Σ	HSG	RI	AMC	Fp	F	Tc	I	C	Q
			ft	in	ft	ft	%	cfs	ac	ac	ac	ac	ac	ac				in/hr	in/hr	min	in/hr		cfs
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
20	19	1	200	24	785.78	785.38	0.20%	12.0	8.66	8.66	7.68	7.68	0.98	0.98	B	56	AMC-II	0.46	0.09	11.00	1.54	0.87	11.61
19	18	1	18	30	785.38	785.33	0.30%	26.6	0.20	8.86	0.15	7.83	0.05	1.03	B	56	AMC-II	0.46	0.16	5.00	2.31	0.85	0.39
18	13	1	60	30	785.33	785.15	0.30%	26.6	0.00	8.86	0.00	7.83	0.00	1.03	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
17	11	1	142	15	786.45	784.32	1.50%	9.4	0.75	0.75	0.48	0.48	0.28	0.28	B	56	AMC-II	0.46	0.20	5.00	2.31	0.83	1.45
14	13	2	180	15	788.00	785.15	1.58%	9.6	0.21	0.21	0.02	0.02	0.19	0.19	B	56	AMC-II	0.46	0.42	5.00	2.31	0.74	0.36
13	12	1	100	30	783.89	783.39	0.50%	34.4	0.00	9.07	0.00	7.85	0.00	1.22	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
12	11	2	64	30	783.39	783.07	0.50%	34.4	2.02	11.09	0.82	8.67	1.20	2.42	B	56	AMC-II	0.46	0.29	5.00	2.31	0.79	3.69
11	10	1	74	30	783.07	782.70	0.50%	34.4	0.00	11.84	0.00	9.15	0.00	2.70	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
10	9	1	144	30	782.70	781.98	0.50%	34.4	0.00	11.84	0.00	9.15	0.00	2.70	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
9	4	1	67	30	781.98	781.64	0.50%	34.4	0.70	12.54	0.02	9.16	0.68	3.38	B	56	AMC-II	0.46	0.45	5.00	2.31	0.72	1.17
4	3	1	14	30	781.64	781.50	1.00%	48.6	1.82	14.36	1.82	10.98	0.00	3.38	B	56	AMC-II	0.46	0.05	5.00	2.31	0.90	3.77
3	2	1	21	30	781.50	781.24	1.24%	54.1	0.00	14.36	0.00	10.98	0.00	3.38	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
2	1	1	15	24	782.49	782.40	0.60%	20.8	0.00	14.36	0.00	10.98	0.00	3.38	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
1	A	1	146	24	782.40	781.60	0.55%	19.8	0.00	14.36	0.00	10.98	0.00	3.38	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00

FROM UPSTREAM LATERAL #1				FROM UPSTREAM LATERAL #2				INCOMING PIPE FLOW ADJ.				PEAK FLOW	Q / Q_f	FULL VELOCITY	v / v_f	VELOCITY	Tt	TO DOWNSTREAM STRUCTURE				REMARKS
Tc	I	C	Q	Tc	I	C	Q	ADJ?	Tc	I	Q							Tc	I	C	Q	
min	in/hr		cfs	min	in/hr		cfs		min	in/hr	cfs	cfs	%	fps	%	fps	min	min	in/hr		cfs	
(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	11.61	97%	3.8	117%	4.5	0.75	11.75	1.49	0.87	11.22	
11.75	1.49	0.87	11.22	0.00	0.00	0.00	0.00	0	11.75	1.49	11.22	11.47	43%	5.4	93%	5.0	0.06	11.81	1.49	0.87	11.43	
11.81	1.49	0.87	11.43	0.00	0.00	0.00	0.00	0	11.81	1.49	11.43	11.43	43%	5.4	92%	5.0	0.20	12.01	1.47	0.87	11.33	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	1.45	15%	7.6	51%	3.9	0.61	5.61	2.17	0.83	1.36	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.36	4%	7.8	20%	1.6	1.89	6.89	1.96	0.71	0.29	
12.01	1.47	0.87	11.33	6.89	1.96	0.71	0.29	1	12.01	1.47	11.55	11.55	34%	7.0	81%	5.6	0.30	12.30	1.46	0.86	11.38	
12.30	1.46	0.86	11.38	0.00	0.00	0.00	0.00	0	12.30	1.46	11.38	13.72	40%	7.0	89%	6.2	0.17	12.48	1.45	0.84	13.43	
5.61	2.17	0.83	1.36	12.48	1.45	0.84	13.43	1	12.48	1.45	14.33	14.33	42%	7.0	91%	6.4	0.19	12.67	1.44	0.83	14.17	
12.67	1.44	0.83	14.17	0.00	0.00	0.00	0.00	0	12.67	1.44	14.17	14.17	41%	7.0	90%	6.3	0.38	13.05	1.41	0.83	13.95	
13.05	1.41	0.83	13.95	0.00	0.00	0.00	0.00	0	13.05	1.41	13.95	14.66	43%	7.0	92%	6.4	0.17	13.22	1.40	0.82	14.44	
13.22	1.40	0.82	14.44	0.00	0.00	0.00	0.00	0	13.22	1.40	14.44	16.74	34%	9.9	82%	8.1	0.03	13.25	1.40	0.83	16.72	
13.25	1.40	0.83	16.72	0.00	0.00	0.00	0.00	0	13.25	1.40	16.72	16.72	31%	11.0	77%	8.5	0.04	13.29	1.40	0.83	16.69	
13.29	1.40	0.83	16.69	0.00	0.00	0.00	0.00	0	13.29	1.40	16.69	16.69	80%	6.6	121%	8.0	0.03	13.33	1.40	0.83	16.67	
13.33	1.40	0.83	16.67	0.00	0.00	0.00	0.00	0	13.33	1.40	16.67	16.67	84%	6.3	121%	7.7	0.32	13.64	1.38	0.83	16.45	

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Locality: City of Riverside
Latitude: 33.9765
Longitude: -117.3829
Storm: 10-year
n = 0.011 (Manning roughness coefficient)

STRUCTURE ID	DOWNSTREAM INVERT	DOWNSTREAM HGL ELEV.	DESIGN HGL ELEV.	DEPTH	DIA.	FLOW	CAPACITY	PERCENT FULL	FULL VEL.	V / Vf	VELOCITY	$V^2 / 2g$	FRICTION SLOPE	DOWNSTREAM LENGTH, L	HEAD LOSS CALCULATIONS					UPSTREAM HGL ELEV.
				d	D	Q	Qf		Vf		V				FRICTION	ANGLE	BEND	JUNCTION	TOTAL	
	ft	ft	ft	in	in	cfs	cfs	Q / Qf	fps		fps		Sf	ft	Hf	Δ	Hb	Hj	H	ft
1	781.60	781.60	783.60	18.8	24.0	16.7	19.8	84%	6.3	121%	7.7	0.91	0.389%	146	0.57	90	0.18	0.23	0.98	784.58
2	782.40	784.58	784.58	18.0	24.0	16.7	20.8	80%	6.6	121%	8.0	0.98	0.390%	15	0.06	0	0.00	0.25	0.30	784.88
3	781.24	784.88	784.88	10.4	30.0	16.7	54.1	31%	11.0	77%	8.5	1.11	0.119%	21	0.02	0	0.00	0.28	0.30	785.18
4	781.50	785.18	785.18	11.3	30.0	16.7	48.6	34%	9.9	82%	8.1	1.01	0.119%	14	0.02	90	0.20	0.25	0.47	785.66
9	781.64	785.66	785.66	13.3	30.0	14.7	34.4	43%	7.0	92%	6.4	0.64	0.091%	67	0.06	90	0.13	0.16	0.35	786.01
10	781.98	786.01	786.01	12.9	30.0	14.2	34.4	41%	7.0	90%	6.3	0.62	0.086%	144	0.12	70	0.11	0.15	0.39	786.39
11	782.70	786.39	786.39	13.0	30.0	14.3	34.4	42%	7.0	91%	6.4	0.63	0.087%	74	0.06	20	0.06	0.16	0.28	786.67
12	783.07	786.67	786.67	12.6	30.0	13.7	34.4	40%	7.0	89%	6.2	0.60	0.080%	64	0.05	0	0.00	0.15	0.20	786.87
13	783.39	786.87	786.87	11.1	30.0	11.6	34.4	34%	7.0	81%	5.6	0.49	0.057%	100	0.06	90	0.10	0.12	0.28	787.15
14	785.15	787.15	787.15	1.2	15.0	0.4	9.6	4%	7.8	20%	1.6	0.04	0.002%	180	0.00	90	0.01	0.01	0.02	787.17
17	784.32	786.67	786.67	3.2	15.0	1.4	9.4	15%	7.6	51%	3.9	0.23	0.036%	142	0.05	0	0.00	0.06	0.11	786.78
18	785.15	787.15	787.65	13.3	30.0	11.4	26.6	43%	5.4	92%	5.0	0.39	0.056%	60	0.03	90	0.08	0.10	0.21	787.86
19	785.33	787.86	787.86	13.4	30.0	11.5	26.6	43%	5.4	93%	5.0	0.39	0.056%	18	0.01	90	0.08	0.10	0.19	788.04
20	785.38	788.04	788.04	22.3	24.0	11.6	12.0	97%	3.8	117%	4.5	0.31	0.189%	200	0.38	0	0.00	0.08	0.45	788.50

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Locality: City of Riverside
Latitude: 33.9765
Longitude: -117.3829
Storm: 100-year P = 1.06 (1-hour)
m = -0.510 (slope of IDF curve)
k = 8.563 k = P / (60 min ^ m)
n = 0.011 (Manning roughness coefficient)

NOAA Atlas 14, Volume 6, Version 2 - Point Precipitation Frequency Estimates							
P (in)	**1-year**	**2-year**	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
5-min:	0.090	0.115	0.150	0.180	0.222	0.256	0.292
10-min:	0.129	0.165	0.215	0.258	0.318	0.367	0.418
15-min:	0.156	0.200	0.260	0.312	0.385	0.444	0.506
30-min:	0.225	0.289	0.376	0.450	0.556	0.641	0.731
60-min:	0.325	0.416	0.542	0.649	0.801	0.924	1.060
3-hr:	0.565	0.719	0.924	1.090	1.330	1.500	1.690
6-hr:	0.775	0.993	1.090	1.510	1.830	2.070	2.320
24-hr:	1.340	1.790	2.370	2.850	3.500	4.000	4.510

*Rainfall Intensity, I = (k) x (Storm Duration, Tc) ^ (m)

FROM POINT	TO POINT	LAT. #	LENGTH	SIZE	INVERT ELEVATIONS		SLOPE	PIPE CAPACITY	TOTAL AREA		IMPV. AREA		PERV. AREA		FROM CONTRIBUTING DRAINAGE AREA AND SURFACE RUNOFF								
					UP	DN			EA.	Σ	EA.	Σ	EA.	Σ	HSG	RI	AMC	Fp	F	Tc	I	C	Q
			ft	in	ft	ft	%	cfs	ac	ac	ac	ac	ac	ac				in/hr	in/hr	min	in/hr		cfs
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
20	19	1	200	24	785.78	785.38	0.20%	12.0	8.66	8.66	7.68	7.68	0.98	0.98	B	56	AMC-II	0.46	0.09	11.00	2.52	0.88	19.23
19	18	1	18	30	785.38	785.33	0.30%	26.6	0.20	8.86	0.15	7.83	0.05	1.03	B	56	AMC-II	0.46	0.16	5.00	3.77	0.87	0.66
18	13	1	60	30	785.33	785.15	0.30%	26.6	0.00	8.86	0.00	7.83	0.00	1.03	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
17	11	1	142	15	786.45	784.32	1.50%	9.4	0.75	0.75	0.48	0.48	0.28	0.28	B	56	AMC-II	0.46	0.20	5.00	3.77	0.86	2.44
14	13	2	180	15	788.00	785.15	1.58%	9.6	0.21	0.21	0.02	0.02	0.19	0.19	B	56	AMC-II	0.46	0.42	5.00	3.77	0.80	0.63
13	12	1	100	30	783.89	783.39	0.50%	34.4	0.00	9.07	0.00	7.85	0.00	1.22	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
12	11	2	64	30	783.39	783.07	0.50%	34.4	2.02	11.09	0.82	8.67	1.20	2.42	B	56	AMC-II	0.46	0.29	5.00	3.77	0.83	6.35
11	10	1	74	30	783.07	782.70	0.50%	34.4	0.00	11.84	0.00	9.15	0.00	2.70	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
10	9	1	144	30	782.70	781.98	0.50%	34.4	0.00	11.84	0.00	9.15	0.00	2.70	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
9	4	1	67	30	781.98	781.64	0.50%	34.4	0.70	12.54	0.02	9.16	0.68	3.38	B	56	AMC-II	0.46	0.45	5.00	3.77	0.79	2.08
4	3	1	14	30	781.64	781.50	1.00%	48.6	1.82	14.36	1.82	10.98	0.00	3.38	B	56	AMC-II	0.46	0.05	5.00	3.77	0.90	6.16
3	2	1	21	30	781.50	781.24	1.24%	54.1	0.00	14.36	0.00	10.98	0.00	3.38	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
2	1	1	15	24	782.49	782.40	0.60%	20.8	0.00	14.36	0.00	10.98	0.00	3.38	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00
1	A	1	146	24	782.40	781.60	0.55%	19.8	0.00	14.36	0.00	10.98	0.00	3.38	B	56	AMC-II	0.46	0.00	0.00	0.00	0.00	0.00

FROM UPSTREAM LATERAL #1				FROM UPSTREAM LATERAL #2				INCOMING PIPE FLOW ADJ.				PEAK FLOW	Q / Q_f	FULL VELOCITY	v / v_f	VELOCITY	Tt	TO DOWNSTREAM STRUCTURE				REMARKS
Tc	I	C	Q	Tc	I	C	Q	ADJ?	Tc	I	Q							Tc	I	C	Q	
min	in/hr		cfs	min	in/hr		cfs		min	in/hr	cfs	cfs	%	fps	%	fps	min	min	in/hr		cfs	
(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	19.23	160%	3.8	100%	3.8	0.88	11.88	2.42	0.88	18.47	SURCHARGED
11.88	2.42	0.88	18.47	0.00	0.00	0.00	0.00	0	11.88	2.42	18.47	18.90	71%	5.4	117%	6.3	0.05	11.92	2.42	0.88	18.85	
11.92	2.42	0.88	18.85	0.00	0.00	0.00	0.00	0	11.92	2.42	18.85	18.85	71%	5.4	116%	6.3	0.16	12.08	2.40	0.88	18.72	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	2.44	26%	7.6	69%	5.3	0.45	5.45	3.61	0.86	2.33	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.63	7%	7.8	29%	2.3	1.30	6.30	3.35	0.79	0.55	
12.08	2.40	0.88	18.72	6.30	3.35	0.79	0.55	1	12.08	2.40	19.12	19.12	56%	7.0	105%	7.4	0.23	12.31	2.38	0.88	18.91	
12.31	2.38	0.88	18.91	0.00	0.00	0.00	0.00	0	12.31	2.38	18.91	22.92	67%	7.0	114%	8.0	0.13	12.44	2.37	0.86	22.61	
5.45	3.61	0.86	2.33	12.44	2.37	0.86	22.61	1	12.44	2.37	24.13	24.13	70%	7.0	116%	8.1	0.15	12.59	2.35	0.86	23.94	
12.59	2.35	0.86	23.94	0.00	0.00	0.00	0.00	0	12.59	2.35	23.94	23.94	70%	7.0	116%	8.1	0.30	12.89	2.32	0.86	23.64	
12.89	2.32	0.86	23.64	0.00	0.00	0.00	0.00	0	12.89	2.32	23.64	24.93	73%	7.0	117%	8.2	0.14	13.03	2.31	0.85	24.68	
13.03	2.31	0.85	24.68	0.00	0.00	0.00	0.00	0	13.03	2.31	24.68	28.45	59%	9.9	108%	10.6	0.02	13.05	2.31	0.86	28.43	
13.05	2.31	0.86	28.43	0.00	0.00	0.00	0.00	0	13.05	2.31	28.43	28.43	53%	11.0	102%	11.3	0.03	13.08	2.31	0.86	28.39	
13.08	2.31	0.86	28.39	0.00	0.00	0.00	0.00	0	13.08	2.31	28.39	28.39	137%	6.6	100%	6.6	0.04	13.12	2.30	0.86	28.35	SURCHARGED
13.12	2.30	0.86	28.35	0.00	0.00	0.00	0.00	0	13.12	2.30	28.35	28.35	143%	6.3	100%	6.3	0.39	13.50	2.27	0.86	27.91	SURCHARGED

Kimley-Horn and Associates, Inc.

Date: 5/15/2013
Project: Riverside Community Hospital
Project #: 095680007
Locality: City of Riverside
Latitude: 33.9765
Longitude: -117.3829
Storm: 100-year
n = 0.011 (Manning roughness coefficient)

STRUCTURE ID	DOWNSTREAM INVERT	DOWNSTREAM HGL ELEV.	DESIGN HGL ELEV.	DEPTH	DIA.	FLOW	CAPACITY	PERCENT FULL	FULL VEL.	V / Vf	VELOCITY	$V^2 / 2g$	FRICTION SLOPE	DOWNSTREAM LENGTH, L	HEAD LOSS CALCULATIONS					UPSTREAM HGL ELEV.
				d	D	Q	Qf		Vf		V				FRICTION	ANGLE	BEND	JUNCTION	TOTAL	
	ft	ft	ft	in	in	cfs	cfs	Q / Qf	fps		fps		Sf	ft	Hf	Δ	Hb	Hj	H	ft
1	781.60	781.60	783.60	24.0	24.0	28.3	19.8	143%	6.3	100%	6.3	0.62	1.125%	146	1.64	90	0.12	0.15	1.92	785.52
2	782.40	785.52	785.52	24.0	24.0	28.4	20.8	137%	6.6	100%	6.6	0.68	1.128%	15	0.17	0	0.00	0.17	0.34	785.86
3	781.24	785.86	785.86	15.6	30.0	28.4	54.1	53%	11.0	102%	11.3	1.97	0.344%	21	0.07	0	0.00	0.49	0.56	786.42
4	781.50	786.42	786.42	17.0	30.0	28.5	48.6	59%	9.9	108%	10.6	1.76	0.345%	14	0.05	90	0.35	0.44	0.84	787.26
9	781.64	787.26	787.26	20.4	30.0	24.9	34.4	73%	7.0	117%	8.2	1.04	0.264%	67	0.18	90	0.21	0.26	0.65	787.91
10	781.98	787.91	787.91	19.7	30.0	23.9	34.4	70%	7.0	116%	8.1	1.01	0.244%	144	0.35	70	0.18	0.25	0.78	788.69
11	782.70	788.69	788.69	19.8	30.0	24.1	34.4	70%	7.0	116%	8.1	1.02	0.248%	74	0.18	20	0.10	0.26	0.53	789.23
12	783.07	789.23	789.23	19.0	30.0	22.9	34.4	67%	7.0	114%	8.0	0.98	0.224%	64	0.14	0	0.00	0.25	0.39	789.62
13	783.39	789.62	789.62	16.3	30.0	19.1	34.4	56%	7.0	105%	7.4	0.84	0.156%	100	0.16	90	0.17	0.21	0.53	790.15
14	785.15	790.15	790.15	1.8	15.0	0.6	9.6	7%	7.8	29%	2.3	0.08	0.007%	180	0.01	90	0.02	0.02	0.05	790.20
17	784.32	789.23	789.23	4.6	15.0	2.4	9.4	26%	7.6	69%	5.3	0.44	0.102%	142	0.14	0	0.00	0.11	0.25	789.48
18	785.15	790.15	790.15	20.0	30.0	18.8	26.6	71%	5.4	116%	6.3	0.62	0.151%	60	0.09	90	0.12	0.15	0.37	790.52
19	785.33	790.52	790.52	20.0	30.0	18.9	26.6	71%	5.4	117%	6.3	0.62	0.152%	18	0.03	90	0.12	0.15	0.31	790.82
20	785.38	790.82	790.82	24.0	24.0	19.2	12.0	160%	3.8	100%	3.8	0.23	0.517%	200	1.03	0	0.00	0.06	1.09	791.92

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Kimley-Horn and Associates, Inc.	Date	5/15/2013
Designed by	Adam Schmid	Case No	
Company Project Number/Name	Riverside Community Hospital		

BMP Identification

BMP NAME / ID: Infiltration System

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.55 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
PRKG	*99050*	*Mixed Surface Types*	*1*	*0.89*	*88352.6*			
PRKG	*38010*	*Turf block*	*0.1*	*0.11*	*4198.5*			
MOB	*41920*	*Mixed Surface Types*	*1*	*0.89*	*37392.6*			
MOB	*25460*	*Turf block*	*0.1*	*0.11*	*2812.3*			
TWR 1	*113570*	*Concrete or Asphalt*	*1*	*0.89*	*101304.4*			
TWR 1	*11630*	*Turf block*	*0.1*	*0.11*	*1284.6*			
TWR 2	*56940*	*Roofs*	*1*	*0.89*	*50790.5*			
	386580		***Total***		**286135.5**	**0.55**	***13114.5***	

Proposed Volume must be greater than the Design Capture Volume

Notes:

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Kimley-Horn and Associates, Inc.	Date	5/15/2013
Designed by	Adam Schmid	Case No	
Company Project Number/Name	Riverside Community Hospital		

BMP Identification

BMP NAME / ID: Infiltration System

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.55 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
MLA	*20000*	*Roofs*	*1*	*0.89*	*17840*			
	20000		***Total***		**17840**	**0.55**	***817.7***	

Proposed Volume must be greater than the Design Capture Volume

Notes: