KPC EHS Consultants, LLC

Technical Memorandum

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Date: March 29, 2024 **Revised June 6, 2024**

Re: EPC 24-01 Riverside La Sierra & Victoria Residential Project – Air Quality and GHG Technical Memorandum

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1.0 Purpose

The purpose of this memorandum is to document the results of the air quality (AQ) and greenhouse gas (GHG) emissions assessment as it relates to the potential environmental impacts associated with the construction and operation of the proposed Residential Project on approximately 9.91 acres gross acres.

Project Location & Description

1.1 Project Location:

The proposed project site is located in the City of Riverside, Riverside County, California on the southeast corner of the intersection of La Sierra Avenue and Victoria Avenue and is referred to as APN: 136-220-016.

1.2 Description:

The Applicant is proposing a project that includes 49 single-family residential units, 3,687 square foot water quality basin, interior roadway, driveways, utilities, and landscaping on an approximately 9.91-acre parcel.

2.0 Air Quality & Greenhouse Gas (GHG) Assessment

2.1 Determination of Significance:

The criteria used to determine the significance related to potential Project related air quality and greenhouse gas emission impacts is based on the California Environmental Quality Act (CEQA) Environmental Checklist, Appendix G Thresholds:

2.1.1 Air Quality / GHG Impacts:

Would the Project: Conflict with or obstruct implementation of the applicable air quality plan?

Would the Project: 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?

Would the Project: Expose sensitive receptors to substantial pollutant concentrations?

Would the Project: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

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?

2.1.2 Air Quality Thresholds:

South Coast Air Quality Management District (SCAQMD) was created by the state legislature to facilitate compliance with the federal Clean Air Act and to implement the state air quality program. Toward that end, SCAQMD develops regulations designed to achieve these public health standards by reducing emissions from business and industry. The Project site is located within the South Coast Air Basin (SCAB) which is under the jurisdiction of the SCAQMD. Table 2.1-1 describes the regional significance thresholds established by the SCAQMD to meet national and state air quality standards.

Table 2.1-1: South Coast Air Quality Management District Regional Significance Thresholds

Pollutant	Emissions (Construction) (pounds/day)	Emissions (Operational) (pounds/day)
NOx	100	55
VOC	75	55
PM10	150	150
PM2.5	55	55
SOx	150	150
CO	550	550

Source: South Coast Air Quality Management District CEQA Air Quality Significance Thresholds, March 2015.

2.1.3 GHG Thresholds:

The City of Riverside adopted a Climate Action Plan (CAP) as part of the Restorative Growthprint Economic Prosperity Action Plan and Climate Action Plan in 2016, referred to as the Riverside Restorative Growthprint or RRG. The RRG represents 3 separate but integrated planning efforts including: Western Riverside Council of Governments (WRCOG) subregional Climate Action Plan (Subregional CAP), RRG – Economic Prosperity Action Plan (RRG-EPAP), and RRG – Climate Action Plan (RRG-CAP).

The City has adopted 2020 and 2035 emissions reduction targets with a 2020 target of a 15% reduction and 2035 target of 49% reduction form the 2010 baseline. To achieve the proposed targets the City developed local reduction measures. The local reduction measures in the RRG-CAP are organized into four major sectors:

- Energy (including electricity and natural gas consumption)
- Transportation and Land Use
- Water
- Solid Waste

The City however has not adopted aa qualitative significance threshold for determining a project's GHG emissions impacts. Therefore, the *SCAQMD's Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plan*s proposed a screening level of 3,000 Metric Tons CO2 equivalent per year (MTCO2e/yr) for residential and commercial projects which has been accepted and used within the City of Riverside, the County of Riverside, and many cities within the South Coast Air Basin.

3.0 Environmental Impacts:

This section analyzes the proposed Project's potential Air Quality and GHG impacts for construction, operations, plan consistency, and cumulative effects.

3.1 Construction Emissions:

Construction emissions for the Project were estimated by using the California Emissions Estimator Model (CalEEMod) version 2022.1.1.22, which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies to quantify potential criteria pollutant emissions associated with both construction and operations emissions. CalEEMod is authorized for use to assess project emissions by the SCAQMD. Construction emissions are summarized in Table 3.1-1.

Construction emissions were based on CalEEMod Land Use for development of a 49 Single-Family dwelling unit Project. Construction was estimated for a 300-day construction schedule, with default values used for the schedule. Default values were used for each construction phase including site preparation, grading, building construction, paving, and architectural coating as well as defaults for off-road construction equipment. Peak emissions represent the highest value from the summer and winter modeling. SCAQMD significance thresholds were used for determining the project's impacts. All construction emissions are below the SCAQMD thresholds.

Table 3.1-1 - Summary of Peak Construction Emissions (No Mitigation)

Year/Season	Emissions (lbs/day)					
	ROG	NOX	CO	SOX	PM10	PM2.5
Construction 2024 (Summer)	3.74	36.0	34.4	0.10	9.49	5.47
Construction 2024 (Winter)	1.29	11.5	14.3	0.02	0.78	0.53
Construction 2025 (Summer)	30.0	10.7	14.5	0.02	0.71	0.47
Construction 2025 (Winter)	1.20	10.7	14.1	0.02	0.71	0.47
Maximum Daily Emissions	**30.0**	**36.0**	**34.4**	**0.10**	**9.49**	**5.47**
SCAQMD Regional Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod 2022.1.1.22 Datasheets. (Appendix A).

3.2 Operational Emissions:

Operational emissions for the Project were estimated by using the California Emissions Estimator Model (CalEEMod) which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies to quantify potential criteria pollutant emissions associated with both construction and operations emissions. CalEEMod is authorized for use to assess project emissions by the SCAQMD. Operations emissions include stationary (residence emissions), mobile (transportation emissions), and area (on-going architectural coatings, consumer product use, landscaping maintenance emissions), default values were used . SCAQMD significance thresholds were used for determining the project's impacts Operation emissions are summarized in Table 2.3-1 for Summer Emissions and Table 2.3-2 for Winter Emissions. All operations emissions are below the SCAQMD thresholds.

3.2.1 Area Source Emissions

Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using CalEEMod.

Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on assumptions provided in CalEEMod. In the case of the commercial uses proposed by the Project, no substantive on-site use of consumer products is anticipated.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.2.2 Energy Source Emissions

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the air basin, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod.

3.2.3 MOBILE SOURCE EMISSIONS

Vehicles

Project-related operational air quality impacts derive primarily from vehicle trips generated by the Project. CalEEMod Version 2022.1.1.22 default values were used for the projects trip characteristics for operational truck and passenger vehicle totals.

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates. The emissions estimates for travel on paved roads were calculated using CalEEMod.

Table 3.2-1 - Summary of Peak Operational Summer Emissions

Source	Emissions (lbs/day)					
	VOC/ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Mobile Source	1.85	1.56	14.4	0.03	3.06	0.79
Area Source	2.46	0.03	2.78	<0.005	<0.005	<0.005
Energy Source	0.03	0.44	0.19	<0.005	0.04	0.04
Total Maximum Daily Emissions	**4.33**	**2.03**	**17.3**	**0.04**	**3.10**	**0.83**
SCAQMD Regional Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod 2022.1.1.22 Datasheets. (Appendix A).

Table 3.2-2 - Summary of Peak Operational Winter Emissions

Source	Emissions (lbs/day)					
	VOC/ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Mobile Source	1.73	1.56	12.2	0.03	3.06	0.79
Area Source	2.21	-	-	-	-	-
Energy Source	0.03	0.44	0.19	<0.005	0.04	0.04
Total Maximum Daily Emissions	**3.96**	**2.12**	**12.4**	**0.04**	**3.10**	**0.83**
SCAQMD Regional Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod 2022.1.1.22 Datasheets. (Appendix A).

3.3 Greenhouse Gas Emissions (GHG):

GHG emissions for the Project were estimated by using the California Emissions Estimator Model (CalEEMod) which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies to quantify potential criteria pollutant emissions associated with both construction and operations emissions. CalEEMod is authorized for use to assess project emissions by the SCAQMD. As previously discussed, the SCAQMD significance threshold of 3,000 $MTCO_2e$/Year was used for determining the project's GHG emissions impacts. Construction and operation emissions are presented in Table 3.3-1 and summarized in Table 3.3-2. The GHG emissions for both construction and operations of the Project are estimated to below the 3,000 $MTCO_2e$/Year threshold.

Table 3.3-1 - Project Greenhouse Gas Emissions

Source		GHG Emissions MT/yr		
	N2O	CO2	CH4	CO2e
Mobile Sources	0.03	549	0.03	559
Area	< 0.005	0.84	< 0.005	0.85
Energy	< 0.005	186	0.02	186
Water/Wastewater	< 0.005	15.4	0.07	17.6
Solid Waste	0.000	4.00	0.40	14.0
Refrigerant				0.11
30-year Amortized Construction GHG				15.23
TOTAL			*Metric Tons / Year*	***792.79***
SCAQMD Threshold			[1]	**3,000**
Exceed Threshold?				**NO**

Source: CalEEMod 2022.1.1.19 Datasheets. (Appendix A).

Table 3.3-2 - Project Greenhouse Gas Emissions Summary

GHG Emissions Source	Annual Emissions Metric Tons	Annual Threshold Tons/Metric Tons	Exceeds Threshold?
Construction 2024	246	**3,000**	**NO**
Construction 2025	211	**3,000**	**NO**
Operations	777.56	**3,000**	**NO**

Source: CalEEMod 2022.1.1.19 Datasheets. (Appendix A).

3.4 Objectionable Odors:

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project does not propose any of the above-described uses. Potential odor sources associated with the Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's long-term operational uses.

[1] CalEEMod GHG Emissions for GHG CO2e is calculated in Metric Tons (MT) per year.

The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. Additionally, the Project is required to comply with the provisions of SCAQMD Rule 402 "Nuisance" which was established to reduce odorous emissions into the atmosphere. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required.

3.5 Sensitive Receptors:

Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, persons over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as the following are land uses (sensitive sites) where sensitive receptors are typically located:

- Schools, playgrounds, and childcare centers
- Long-term health care facilities
- Rehabilitation centers
- Convalescent centers
- Hospitals
- Retirement homes
- Residences

Sensitive receptor locations are generally identified as facilities where it is possible that an individual could remain for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor because employees typically are present for shorter periods of time, such as eight hours.

The closest sensitive receptors to the Project site are include residential uses around the Project site, as indicated in Table 3.5-1

Table 3.5-1 – Sensitive Receptor Locations

Closest Receptor	Distance from Project Site Boundary (feet)	Distance from Project Construction Center (feet)
Residence Southeast	75	425
Residence Northeast across Millsweet Pl	60	370
Residence – North across Victoria Ave.	175	500
Residential Southwest across La Sierra Ave.	115	450

Source: Google Earth Pro, March 25, 2024

The properties around the Project site are existing residential uses and as such the Project would be compatible with surrounding land uses and would not adversely impact sensitive receptors during operations.

Whenever a project would require use of chemical compounds that have been identified in SCAQMD Rule 1401; placed on CARB's air toxics list pursuant to Assembly Bill 1807 (AB 1807), Air Contaminant Identification and Control Act (1983); or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment (HRA) is required by the SCAQMD. Residential, commercial, and office uses do not use substantial quantities of TACs.

Guidance for conducting a Health risk Assessments (HRA), typically includes the following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated:

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet; and,
- A gasoline dispensing facility within 300 feet.

The Project is a residential development and does not produce toxic air emissions such as those generated by industrial manufacturing uses or uses that generate heavy-duty diesel truck emissions.

3.6 Localized Air Quality Impacts

The South Coast Air Quality Management District has established Localized Significance Thresholds (LST) which are used to determine whether a project may generate significant adverse localized air quality impacts for both construction and on-site operations. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be to be a receptor such as residential, hospital, convalescent facility where it is possible that an individual could remain for 24 hours If the calculated emissions for the proposed construction or operational activities are below the LST emission thresholds then the proposed construction or operation activity is not significant for air quality. (SCAQMD) The nearest sensitive receptors are residential homes located approximately 60 feet from the Project site boundary, 370 feet from the center of the site to the north of the project site.

The Project site is located in Source Receptor Area (SRA) #23 – Metropolitan Riverside County. The total daily disturbed acreage used for the Project is approximately 5-acres (this is the maximum acreage to be graded/disturbed per day) with the closest receptor at 25 meters (82 feet).

Table 3.6-1 identifies the maximum daily localized emissions thresholds that are applicable to the Project.

Table 3.6-1: Maximum Daily Localized Emissions Thresholds

Pollutant	Construction	Operations
Localized Thresholds (pounds per day)		
NO_X	270	270
CO	1,577	1,577
PM_{10}	13	4
$PM_{2.5}$	8	2

Source: Localized Thresholds presented in this table are based on the SCAQMD Final Localized Significance Threshold Methodology, July 2008.

Localized Construction Emissions

As shown in Table 3.6-2, using the CalEEMod Mitigated Construction Emissions which incorporates Rule 403 dust control measures, the localized construction emissions would not exceed the applicable SCAQMD LSTs for emissions for construction activities with Rule 403 measures applied to the Project, including watering site 2 times per day, reducing speed on site, and street sweeping. Thus, a less than significant impact would occur for Project-related construction-source localized emissions and no mitigation is required.

Table 3.6-2: Summary of Localized Significance Construction Emissions

Grading Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	36.0	34.4	9.49	5.47
SCAQMD Localized Threshold	**270**	**1,577**	**13**	**8**
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: Air Quality Assessment, (Appendix A).

Localized On-Site Operational Emissions

According to the SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the project includes substantive stationary sources of emissions, or uses that attract mobile sources that may spend long periods queuing and idling at the site (e.g., industrial uses, transfer facilities, and warehouses). The Project does not propose or require uses that would constitute substantive stationary sources of emissions; or uses that attract mobile emissions sources that may spend long periods queuing and idling at the site. Accordingly, no operational-source emissions LST analysis is required.

3.7 CO "Hotspot" Analysis:

As discussed below, the Project would not result in potentially adverse CO concentrations or "hotspots." Further, detailed modeling of Project-specific carbon monoxide (CO) "hot spots" is not needed to reach this conclusion.

The SSAB is designated attainment under the CAAQS and NAAQS for CO. An adverse CO hotspot would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour

standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. Due to changing regulations vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in Basin have steadily declined.

The SCAQMD, as part of their 2003 AQMP, conducted modeling for CO Hotspot Analysis at multiple congested intersections in their South Coast Air Basin, including the intersection of Wilshire Boulevard and Veteran Avenue, considered one of the most congested intersections in Southern California with an ADT of approximately 100,000 vehicles. The CO concentrations modeled by the SCAQMD's analysis identified all traffic induced CO levels below Federal and State thresholds. As the CO hotspots were not modeled at an intersection that accommodates over 100,000 vehicles per day, it can be reasonably deduced that CO hotspots would not be experienced at any intersections in the vicinity of the proposed project.

Given the extremely low level of CO concentrations in the project area and no project-traffic related impacts at any intersections, project-related vehicle emissions are not expected to result in the CO concentrations exceeding the State or federal CO standards.

3.8 Cumulative Impacts:

The project area is designated as a non-attainment area for ozone and a non-attainment area for PM2.5 and PM10. The Project would comply with the mandatory requirements of SCAQMD's Rule 403 (fugitive dust control) during construction, as well as all other adopted AQMP emissions control measures. The project also is required to comply with California Code of Regulations Title 13, Division 3, and specifically its Chapter 1, Article 4.5, Section 2025, "Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles" and its Chapter 10, Article 1, Section 2485, "Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling." Per SCAQMD rules and mandates, and California Code of Regulation requirements, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements are imposed on all projects in the South Coast Air Basin.

In determining whether the project would 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), the non-attainment pollutants of concern for this impact are ozone and PM10. In developing the thresholds of significance for air pollutants disclosed above the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

As shown in Tables 3.1-1, 3.2-1, 3.2-2, 3.3-1, 3.3-2, and 3.6-2 above, the project does not exceed the identified significance thresholds, as such, emissions would not be cumulatively considerable.

3.9 Conformity and Consistency:

The following analysis is consistent with the preferred analysis approach recommended by the SCAQMD *CEQA Air Quality Handbook.*

3.9.1 Conformity with Air Quality Management Plans: The Project is located within the SCAB and under the jurisdiction of the SCAQMD. Under the Federal Clean Air Act, the SCAQMD has adopted a variety of attainment plans (i.e., "Air Quality Management Plans") for a variety of non-attainment pollutants. A complete list of the various air quality management plans is available from the SCAQMD on their website at: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan

The SCAQMD is responsible for maintaining and ensuring compliance with the various Air Quality Management Plans. Conformity is determined based on the following criteria:

- A project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project may also be non-conforming if it increases the gross number of dwelling units, increases the number of trips, and/or increases the overall vehicle miles traveled in an affected area (relative to the applicable land use plan).
- A project is conforming if it complies with all applicable SCAQMD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan).

3.9.2 Consistency with Emission Thresholds*:* As shown in Tables 3.1-1, 3.2-1, 3.2-2, 3.3-1, 3.3-2, and 3.6-2 the Project would not exceed SCAQMD significance thresholds for any criteria pollutant during construction or during long-term operation. Accordingly, the Project's air quality emissions are less than significant.

3.9.3 Consistency with Control Measures: The construction contractors are required to comply with rules, regulations, and control measures including but not limited to controlling Fugitive Dust (Rule 403), Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources (Rule 403.1), and the application of architectural coatings during building construction (Rule 1113).

3.9.4 Consistency with Growth Forecasts: The Project site's land use is designated as Low Density Residential (LDR), with a zoning of Single-Family Residential (R-1-1/2) with a maximum dwelling unit per acre of 2 du/ac. The R-1-1/2 zone would provide for development on the 8.81-acre site a maximum of 18 dwelling units. The Project will require a General Plan Amendment (GPA) and Change of Zone (CZ) which increases the number of units and estimated population growth as compared to the current land use land use designation and zoning. Therefore, the Project must be evaluated to determine if the Project's impacts would exceed the assumptions in the 2022 AQMP.

The projections in the AQMP for growth assumptions are based on the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS is updated every four years with the current adopted plan being the 2020-2045 RTP/SCS. According to the 2020-2045 RTP/SCS the forecast for the City's population growth is estimated to at 19,000 residents and additional households at 5,500. The proposed Project would include the development of 49 single family dwelling units. According to the State of California Department of Fina*nce E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2023* the City has an estimated 3.05 persons per household.[2] The project would therefore increase the current population by approximately 150 residents. The increase of 150 residents is well within the estimated 5,500 projected increase in residents and as such the Project would be consistent with the growth assumptions from the 2020-2045 RTP/SCS used in the SCAQMD plans.

4.0 Conclusion

Based on the assessment in Section 3.0 all estimated Project emissions for construction and operations are below the SCAQMD significance threshold levels and as such impacts to the environment for Air Quality and Greenhouse Gases are less than significant. Additionally, the proposed Project will not conflict with any air quality or GHG plans.

[2] California Department of Finance E-5 Spreadsheet, accessed: https://dof.ca.gov/forecasting/Demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2023/

APPENDIX A

La Sierra and Victoria Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	La Sierra and Victoria
Construction Start Date	7/2/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	19.2
Location	33.88781647329854, -117.46277661097534
County	Riverside-South Coast
City	Riverside
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5461
EDFZ	11
Electric Utility	City of Riverside
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	49.0	Dwelling Unit	8.81	95,550	573,930	—	158	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.44	30.0	36.0	34.4	0.10	1.60	7.89	9.49	1.47	3.99	5.47	—	13,834	13,834	0.32	1.75	23.4	14,387
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.54	1.29	11.5	14.3	0.02	0.50	0.28	0.78	0.46	0.07	0.53	—	2,794	2,794	0.11	0.05	0.04	2,812
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.66	2.20	5.16	6.58	0.01	0.21	0.59	0.80	0.19	0.24	0.43	—	1,511	1,511	0.05	0.11	0.70	1,545
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.40	0.94	1.20	< 0.005	0.04	0.11	0.15	0.04	0.04	0.08	—	250	250	0.01	0.02	0.12	256
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.44	3.74	36.0	34.4	0.10	1.60	7.89	9.49	1.47	3.99	5.47	—	13,834	13,834	0.32	1.75	23.4	14,387
2025	1.45	30.0	10.7	14.5	0.02	0.43	0.28	0.71	0.40	0.07	0.47	—	2,807	2,807	0.11	0.05	1.37	2,826
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.54	1.29	11.5	14.3	0.02	0.50	0.28	0.78	0.46	0.07	0.53	—	2,794	2,794	0.11	0.05	0.04	2,812
2025	1.44	1.20	10.7	14.1	0.02	0.43	0.28	0.71	0.40	0.07	0.47	—	2,787	2,787	0.11	0.05	0.04	2,805
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.60	0.50	5.16	5.27	0.01	0.21	0.59	0.80	0.19	0.24	0.43	—	1,511	1,511	0.05	0.11	0.70	1,545
2025	0.66	2.20	4.93	6.58	0.01	0.20	0.13	0.33	0.19	0.03	0.22	—	1,266	1,266	0.05	0.02	0.27	1,275
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.11	0.09	0.94	0.96	< 0.005	0.04	0.11	0.15	0.04	0.04	0.08	—	250	250	0.01	0.02	0.12	256

2025	0.12	0.40	0.90	1.20	< 0.005	0.04	0.02	0.06	0.03	0.01	0.04	—	210	210	0.01	< 0.005	0.04	211

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.31	4.33	2.03	17.3	0.04	0.06	3.03	3.10	0.06	0.77	0.83	28.0	4,796	4,824	3.05	0.18	13.1	4,966
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.93	3.96	2.12	12.4	0.04	0.06	3.03	3.10	0.06	0.77	0.83	28.0	4,573	4,601	3.06	0.18	1.01	4,733
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.05	4.08	2.13	14.4	0.04	0.06	2.93	2.99	0.06	0.74	0.80	28.0	4,533	4,561	3.05	0.18	5.91	4,697
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.37	0.74	0.39	2.63	0.01	0.01	0.53	0.55	0.01	0.14	0.15	4.63	751	755	0.51	0.03	0.98	778
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.00	1.85	1.56	14.4	0.03	0.03	3.03	3.06	0.02	0.77	0.79	—	3,577	3,577	0.15	0.16	12.4	3,642
Area	0.26	2.46	0.03	2.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.43	7.43	< 0.005	< 0.005	—	7.46
Energy	0.05	0.03	0.44	0.19	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,122	1,122	0.09	0.01	—	1,126
Water	—	—	—	—	—	—	—	—	—	—	—	3.82	89.4	93.2	0.40	0.01	—	106
Waste	—	—	—	—	—	—	—	—	—	—	—	24.1	0.00	24.1	2.41	0.00	—	84.5
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	2.31	4.33	2.03	17.3	0.04	0.06	3.03	3.10	0.06	0.77	0.83	28.0	4,796	4,824	3.05	0.18	13.1	4,966
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.88	1.73	1.68	12.2	0.03	0.03	3.03	3.06	0.02	0.77	0.79	—	3,361	3,361	0.16	0.17	0.32	3,415
Area	—	2.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.05	0.03	0.44	0.19	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,122	1,122	0.09	0.01	—	1,126
Water	—	—	—	—	—	—	—	—	—	—	—	3.82	89.4	93.2	0.40	0.01	—	106
Waste	—	—	—	—	—	—	—	—	—	—	—	24.1	0.00	24.1	2.41	0.00	—	84.5
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	1.93	3.96	2.12	12.4	0.04	0.06	3.03	3.10	0.06	0.77	0.83	28.0	4,573	4,601	3.06	0.18	1.01	4,733

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.82	1.68	1.67	12.3	0.03	0.03	2.93	2.96	0.02	0.74	0.77	—	3,317	3,317	0.15	0.16	5.23	3,375
Area	0.18	2.38	0.02	1.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.09	5.09	< 0.005	< 0.005	—	5.11
Energy	0.05	0.03	0.44	0.19	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,122	1,122	0.09	0.01	—	1,126
Water	—	—	—	—	—	—	—	—	—	—	—	3.82	89.4	93.2	0.40	0.01	—	106
Waste	—	—	—	—	—	—	—	—	—	—	—	24.1	0.00	24.1	2.41	0.00	—	84.5
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	2.05	4.08	2.13	14.4	0.04	0.06	2.93	2.99	0.06	0.74	0.80	28.0	4,533	4,561	3.05	0.18	5.91	4,697
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.33	0.31	0.30	2.25	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	—	549	549	0.03	0.03	0.87	559
Area	0.03	0.43	< 0.005	0.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.84	0.84	< 0.005	< 0.005	—	0.85
Energy	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	186	186	0.02	< 0.005	—	186
Water	—	—	—	—	—	—	—	—	—	—	—	0.63	14.8	15.4	0.07	< 0.005	—	17.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.00	0.00	4.00	0.40	0.00	—	14.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.37	0.74	0.39	2.63	0.01	0.01	0.53	0.55	0.01	0.14	0.15	4.63	751	755	0.51	0.03	0.98	778

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	1.46	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	252	252	0.01	0.01	1.00	256
Vendor	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	0.00
Hauling	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.42	6.42	< 0.005	< 0.005	0.01	6.51
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.06	1.06	< 0.005	< 0.005	< 0.005	1.08
Vendor	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	0.00
Hauling	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	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.78	2.78	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.00	1.03	< 0.005	0.05	—	0.05	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	216	216	0.01	0.01	0.86	219
Vendor	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	0.00
Hauling	0.44	0.17	12.0	2.90	0.07	0.20	2.75	2.96	0.20	0.77	0.97	—	10,660	10,660	0.19	1.72	22.6	11,199
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	0.02	11.2
Vendor	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	0.00

Hauling	0.02	0.01	0.69	0.16	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	584	584	0.01	0.09	0.53	613
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.13	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.7	96.7	< 0.005	0.02	0.09	102

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	2.42	2.82	0.01	0.11	—	0.11	0.10	—	0.10	—	516	516	0.02	< 0.005	—	518
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.06	0.05	0.44	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	85.5	85.5	< 0.005	< 0.005	—	85.7
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.47	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	254	254	0.01	0.01	1.01	258
Vendor	0.01	< 0.005	0.18	0.06	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	163	163	< 0.005	0.02	0.46	170
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.11	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	233	233	0.01	0.01	0.03	236
Vendor	0.01	< 0.005	0.19	0.06	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	163	163	< 0.005	0.02	0.01	170
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	50.9	50.9	< 0.005	< 0.005	0.09	51.6
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.0	35.0	< 0.005	0.01	0.04	36.6
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.42	8.42	< 0.005	< 0.005	0.02	8.54
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.80	5.80	< 0.005	< 0.005	0.01	6.07
Hauling	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	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.35	5.44	0.01	0.18	—	0.18	0.17	—	0.17	—	999	999	0.04	0.01	—	1,003
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.79	0.99	< 0.005	0.03	—	0.03	0.03	—	0.03	—	165	165	0.01	< 0.005	—	166
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	249	249	0.01	0.01	0.91	252
Vendor	0.01	< 0.005	0.18	0.05	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	< 0.005	0.02	0.45	168
Hauling	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	229	229	0.01	0.01	0.02	231
Vendor	0.01	< 0.005	0.18	0.06	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	< 0.005	0.02	0.01	168
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.45	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	96.5	96.5	< 0.005	< 0.005	0.16	97.8
Vendor	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	66.8	66.8	< 0.005	0.01	0.08	70.0
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.0	16.0	< 0.005	< 0.005	0.03	16.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.01	11.6
Hauling	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	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.16	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.81
Vendor	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	0.00
Hauling	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	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	29.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	1.64	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.27	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	49.7	49.7	< 0.005	< 0.005	0.18	50.5
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.54	2.54	< 0.005	< 0.005	< 0.005	2.57
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.42	0.42	< 0.005	< 0.005	< 0.005	0.43
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.00	1.85	1.56	14.4	0.03	0.03	3.03	3.06	0.02	0.77	0.79	—	3,577	3,577	0.15	0.16	12.4	3,642
Total	2.00	1.85	1.56	14.4	0.03	0.03	3.03	3.06	0.02	0.77	0.79	—	3,577	3,577	0.15	0.16	12.4	3,642
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.88	1.73	1.68	12.2	0.03	0.03	3.03	3.06	0.02	0.77	0.79	—	3,361	3,361	0.16	0.17	0.32	3,415
Total	1.88	1.73	1.68	12.2	0.03	0.03	3.03	3.06	0.02	0.77	0.79	—	3,361	3,361	0.16	0.17	0.32	3,415
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.33	0.31	0.30	2.25	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	—	549	549	0.03	0.03	0.87	559
Total	0.33	0.31	0.30	2.25	0.01	< 0.005	0.53	0.54	< 0.005	0.14	0.14	—	549	549	0.03	0.03	0.87	559

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	563	563	0.04	0.01	—	566
Total	—	—	—	—	—	—	—	—	—	—	—	—	563	563	0.04	0.01	—	566
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	563	563	0.04	0.01	—	566
Total	—	—	—	—	—	—	—	—	—	—	—	—	563	563	0.04	0.01	—	566
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	93.3	93.3	0.01	< 0.005	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	—	—	93.3	93.3	0.01	< 0.005	—	93.7

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.05	0.03	0.44	0.19	< 0.005	0.04	—	0.04	0.04	—	0.04	—	558	558	0.05	< 0.005	—	560
Total	0.05	0.03	0.44	0.19	< 0.005	0.04	—	0.04	0.04	—	0.04	—	558	558	0.05	< 0.005	—	560
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	0.05	0.03	0.44	0.19	< 0.005	0.04	—	0.04	0.04	—	0.04	—	558	558	0.05	< 0.005	—	560
Total	0.05	0.03	0.44	0.19	< 0.005	0.04	—	0.04	0.04	—	0.04	—	558	558	0.05	< 0.005	—	560
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	92.5	92.5	0.01	< 0.005	—	92.7
Total	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	92.5	92.5	0.01	< 0.005	—	92.7

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.25	0.03	2.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.43	7.43	< 0.005	< 0.005	—	7.46
Total	0.26	2.46	0.03	2.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.43	7.43	< 0.005	< 0.005	—	7.46
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	2.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.03	< 0.005	0.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.84	0.84	< 0.005	< 0.005	—	0.85
Total	0.03	0.43	< 0.005	0.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.84	0.84	< 0.005	< 0.005	—	0.85

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.82	89.4	93.2	0.40	0.01	—	106
Total	—	—	—	—	—	—	—	—	—	—	—	3.82	89.4	93.2	0.40	0.01	—	106

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.82	89.4	93.2	0.40	0.01	—	106
Total	—	—	—	—	—	—	—	—	—	—	—	3.82	89.4	93.2	0.40	0.01	—	106
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.63	14.8	15.4	0.07	< 0.005	—	17.6
Total	—	—	—	—	—	—	—	—	—	—	—	0.63	14.8	15.4	0.07	< 0.005	—	17.6

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	24.1	0.00	24.1	2.41	0.00	—	84.5
Total	—	—	—	—	—	—	—	—	—	—	—	24.1	0.00	24.1	2.41	0.00	—	84.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	24.1	0.00	24.1	2.41	0.00	—	84.5
Total	—	—	—	—	—	—	—	—	—	—	—	24.1	0.00	24.1	2.41	0.00	—	84.5

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4.00	0.00	4.00	0.40	0.00	—	14.0
Total	—	—	—	—	—	—	—	—	—	—	—	4.00	0.00	4.00	0.40	0.00	—	14.0

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	7/31/2024	8/14/2024	5.00	10.0	—
Grading	Grading	8/15/2024	9/12/2024	5.00	20.0	—
Building Construction	Building Construction	9/13/2024	8/1/2025	5.00	230	—
Paving	Paving	8/2/2025	8/30/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	8/31/2025	9/28/2025	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45

Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	152	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	17.6	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	5.24	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT

Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	3.53	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	193,489	64,496	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	15.0	0.00	—
Grading	24,346	0.00	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.54

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction

Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.54	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	787	0.03	< 0.005
2025	0.00	600	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	463	467	419	166,816	4,237	4,282	3,838	1,528,042

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

193488.75	64,496	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	457,623	449	0.0330	0.0040	1,742,651

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,993,015	11,122,306

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	44.8	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

8. User Changes to Default Data

Screen	Justification
Land Use	Acreage per Riverside County Parcel Report Generated 3/23/24
Construction: Construction Phases	No demolition phase required
Operations: Hearths	No fireplaces or wood burning stove to be installed