3.10 Noise

This section addresses how the four Project scenarios would or would not result in adverse impacts related to noise. The following section is based upon the Noise Technical Report for the proposed Project prepared by RECON in November 2012 (Appendix I). This section evaluates potential impacts associated with Project construction and future traffic noise on Overlook Parkway and other area roadways.

3.10.1 Regulatory Setting

3.10.1.1 Fundamentals of Traffic Noise and Noise Descriptors

The actual impact of noise is not a function of loudness alone. The time of day which noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. The noise descriptors used for this study are the 1-hour average-equivalent noise level ($L_{eq[1]}$), and the Community Noise Equivalent Level (CNEL).

The $L_{eq(1)}$ is the level of a steady sound which, in the stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound. In other words, the hourly equivalent sound level is the A-weighted sound level over a 1-hour period. The CNEL is a 24-hour A-weighted average sound level [dB(A) L_{eq}] obtained after the addition of 5 decibels (dB) to sound levels occurring between 7:00 P.M. and 10:00 P.M., and 10 dB to sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

Sound from a small, localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level decreases or drops off at a rate of 6 decibels for each doubling of the distance. However, roadway traffic noise is not a single stationary point source of sound. The movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The drop-off rate for a line source is 3 dB for each doubling of distance. This is because noise levels are based on a logarithmic scale. They are not added or subtracted in the usual arithmetical way. For example, if one source emits a noise level of 90 dB and a second identical source emits the same noise level, the total combined noise level would be 93 dB, not 180 dB.

Change in noise levels is perceived as follows: 3 dB(A) barely perceptible, 5 dB(A) readily perceptible, and 10 dB(A) perceived as a doubling or halving of noise (Bolt, Beranek, and Newman, Inc. 1973:1-20; Beranek 1988: 598-599).

3.10.1.2 Standards Applicable to Traffic Noise

The City of Riverside's (City's) Noise Element of the General Plan 2025 specifies compatibility standards for different categories of land-use. The City uses the noise/land use compatibility guidelines outlined in Figure N-10 of the General Plan 2025 (page N-23) in making land use decisions. This figure has been replicated as Table 3.10-1. The land uses in the Project vicinity include residential, commercial-retail, commercial-business/office, and agricultural. As shown, residential uses are *normally acceptable* if noise levels are 60 CNEL or lower, and *conditionally acceptable* if noise levels are 60 to 65 CNEL. Office buildings, business, commercial, and professional uses are *normally acceptable* if noise levels are 65 CNEL or lower, and *conditionally acceptable* if noise levels are 65 to 75 CNEL. Agricultural uses are *normally acceptable* if noise levels are 70 CNEL or lower, and *conditionally acceptable* if noise levels are 70 to 80 CNEL. For the purposes of this analysis, a significant noise impact would occur if noise levels exceed the conditionally acceptable limits (see Table 3.10-1). This is consistent with the General Plan 2025 noise analysis, which establishes a noise-sensitive land use standard of 65 CNEL (see Table 3.10-1) (City of Riverside 2007a).

To determine the potential noise impacts due to each of the proposed scenarios on existing roadways, first the potential difference in noise levels between each of the scenarios and the assumed baselines were calculated. A change in exterior noise levels of 3 dB is considered perceptible; changes of less than 3 decibels in general are not noticeable (Bolt, Beranek, and Newman 1973:1-20; Beranek 1988:598-599). However, for comparison with City noise standards, future noise impacts were determined for all roadways that have a potential 1 dB or more increase. Then, where it is found that the anticipated noise increase is 1 dB or more, the future noise level at 50 feet from the roadway was calculated and compared to the noise compatibility criteria shown in Table 3.10-1. It is assumed that noise level increases of less than 1 dB are not significant. The distance of 50 feet was used as the approximate distance that most residences are located from the roadways.

TABLE 3.10-1
NOISE/LAND USE COMPATIBILITY CRITERIA (CNEL)

Land Use Category	55	60	65	70	75	80	85
Single Family Residential*							
Infill Single Family Residential*							
Commercial – Motels, Hotels, Transient Lodging							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Amphitheaters, Concert Hall, Auditorium, Meeting Hall							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business, Commercial, Professional							
Industrial, Manufacturing, Utilities, Agriculture							
Freeway Adjacent Commercial, Office, and Industrial Uses							

*For properties located within airport influence areas, acceptable noise limits for single family residential uses are established by the Riverside County Airport Land Use Compatibility Plan.

	Normally Acceptable	Specified land use is satisfactory, based on the assumption that any building is of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in design.
	Conditionally Unacceptable	New construction or development should generally not be undertaken, unless it can be demonstrated that noise reduction requirements can be employed to reduce noise impacts to an acceptable level. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

3.10.1.3 Standards Applicable to Construction Noise

Title 7 of the City's Municipal Code contains noise standards that are used to limit noises from sources within its control (i.e., on-site stationary noise and construction equipment). The interior and exterior noise limits are summarized in Table 3.10-2.

TABLE 3.10-2
INTERIOR AND EXTERIOR NOISE STANDARDS

Land Use	Interior	Exterior
Residential	35 dB(A) $L_{eq(1)}$ (night 10 P.M. – 7 A.M.) 45 dB(A) $L_{eq(1)}$ (day 7 A.M. – 10 P.M.)	45 dB(A) $L_{eq(1)}$ (night 10 P.M. – 7 A.M.) 55 dB(A) $L_{eq(1)}$ (day 7 A.M. – 10 P.M.)
Schools	45 dB(A) $L_{eq(1)}$ (7 A.M. – 10 P.M.) while school is in session	--
Hospitals	45 dB(A) $L_{eq(1)}$	--
Office/Commercial	--	65 dB(A) $L_{eq(1)}$
Industrial	--	70 dB(A) $L_{eq(1)}$
Community Support	--	60 dB(A) $L_{eq(1)}$
Public Recreation Facility	--	65 dB(A) $L_{eq(1)}$
Non-Urban	--	70 dB(A) $L_{eq(1)}$

Source: City of Riverside Municipal Code, Title 7: Noise Control, http://www.riversideca.gov/municode/title7.asp
dB(A) L_{eq} = A-weighted average sound level

Additionally, Section 7.25.010 (A)(5) of the Riverside Municipal Code (RMC) states that it shall be unlawful for any person to cause or allow the creation of any noise which exceeds "the exterior noise standard for the applicable land use category, plus twenty decibels or the maximum measured ambient noise level, for any period of time". For the purposes of this analysis, a construction noise limit of 75 dB(A) L_{eq} at residential properties was assumed. This is also consistent with typical construction noise limits used in adjacent jurisdictions.

Construction noise typically involves the loudest common urban noise events associated with building demolition, grading, construction, large diesel engines, and truck deliveries and hauling. Construction activity, although temporary at any given location, can be substantially disruptive to adjacent uses during the construction period. Noise from construction activities is regulated by the RMC. As stated in Section 7.35.010(B)(5) of the Municipal Code, these limits apply to construction that occurs between the hours of 7:00 P.M. and 7:00 A.M. on week days, 5:00 P.M. and 8:00 A.M. on Saturdays, and any time on Sundays or federal holidays.

3.10.2 Environmental Setting

The Project vicinity is generally bounded by Arlington Avenue to the north, State Route 91 (SR-91) to the northwest, Adams Street to the west, Bradley Street to the southwest, John F. Kennedy Drive to the southeast, and Alessandro Boulevard and Trautwein Road on the east.

Crystal View Terrace, Green Orchard Place, and Overlook Parkway are located south of SR-91 and west of Interstate 215 (I-215) in the eastern portion of the City. The local roadways are in an area developed primarily with residential uses in the Alessandro Heights and Canyon Crest neighborhoods. The residential land uses near Crystal View Terrace and Green Orchard Place are categorized as hillside residential and very low density. The Project vicinity includes an open space area encompassing Alessandro Arroyo that is west of Sycamore Canyon Wilderness Park. Victoria Avenue, a historic corridor and scenic parkway, is also within the Project vicinity. Victoria Avenue is listed on the National Register of Historic Places and as Cultural Heritage Landmark No. 8 for the City.

Overlook Parkway is included as an east-west arterial from Washington Street to Alessandro Boulevard in the General Plan 2025; however, Overlook Parkway is not connected for approximately 500 feet between Brittanee Delk Court and Sandtrack Road or between Crystal View Terrace and Via Vista Drive over the Alessandro Arroyo. In addition, Overlook Parkway does not extend west past Washington Street; therefore, a direct connection to SR-91 does not exist from Overlook Parkway. There are existing walls located adjacent to the residences on each side of the existing segments of Overlook Parkway.

Crystal View Terrace is designated as a local road and connects directly to Overlook Parkway. The gate on Crystal View Terrace is 0.17 mile south of Overlook Parkway. Green Orchard Place is designated as a collector road that connects to Kingdom Drive (also a collector road), which in turn connects to Overlook Parkway. The gate on Green Orchard Place is 0.44 mile south of Kingdom Drive. In connection with the approval of two separate tract maps, gates on Crystal View Terrace and Green Orchard Place were installed to prevent cut-through traffic until Overlook Parkway was completed across the Alessandro Arroyo. The gates were installed as mitigation for the two approved tract maps, and are designed to allow emergency vehicle access.

To determine the existing noise environment adjacent to Overlook Parkway, Crystal View Terrace, Green Orchard Place, and other area roadways, noise measurements were taken in the Project vicinity on February 8 and 9, 2011, with the gates on Crystal View Terrace and Green Orchard Plan open, and on March 29 and 30, 2011 with the gates closed. Thirteen measurements were taken with the gates open, and thirteen measurements were taken at the same locations with the gates closed. Additionally,

while the ground-floor measurements were being made, traffic counts were taken on the adjacent roadway.

Table 3.10-3 shows the measurement results. The measured noise levels at each location were normalized to a distance of 50 feet from the roadway centerline as shown in Table 3.10-3.

With the assumed day, evening, and nighttime traffic distribution of 77 percent daytime traffic, 13 percent evening traffic, and 10 percent nighttime traffic, the CNEL is approximately 2 dB above the average daytime hourly equivalent noise level. This traffic distribution was obtained from the data within the Traffic Impact Analysis (TIA) (see Appendices B-1 and B-2 of the TIA). From Table 3.10-3 it can be seen that existing noise levels currently exceed the residential noise limit of 65 CNEL at the residences adjacent to Alessandro Boulevard, Overlook Parkway, Victoria Avenue, and Washington Street.

3.10.3 Significance Determination Thresholds

Based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, impacts related to noise would be significant if the proposed Project would:

1. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

2. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or

3. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

As discussed in the Initial Study Checklist (Appendix B), the proposed Project would have no impact or a less than significant impact in regard to the following criteria, and these are not discussed further in this section:

- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;

- 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 vicinity to excessive noise levels; or

TABLE 3.10-3
EXISTING NOISE LEVELS

Measurement Location	Gates Open/Closed	Duration (minutes)	Average Noise Level [dB(A) L_{eq}]	Roadways	Distance from Centerline (feet)	Noise Level at 50 feet from Source [dB(A) L_{eq}]	Estimated CNEL at 50 feet from Source*
1a	Gates Open	15	54.1	Crystal View Terrace	20	50.1	52
1b	Gates Closed	15	45.1	Crystal View Terrace	20	41.1	43
2a	Gates Open	15	47.7	Green Orchard Place	18	43.3	45
2b	Gates Closed	15	46.1	Green Orchard Place	18	41.7	44
3a	Gates Open	15	53.1	Kingdom Drive	20	49.1	51
3b	Gates Closed	15	52.2	Kingdom Drive	20	48.2	50
4a	Gates Open	15	52.7	Overlook Parkway	41	51.8	54
4b	Gates Closed	15	55.3	Overlook Parkway	41	54.4	56
5a	Gates Open	15	55.9	Berry Road	17	51.2	53
5b	Gates Closed	15	54.6	Berry Road	17	49.9	52
6a	Gates Open	15	58.6	Cactus Avenue	20	54.6	57
6b	Gates Closed	15	57.0	Cactus Avenue	20	53.0	55
7a	Gates Open	15	73.9	Alessandro Boulevard	45	73.4	75
7b	Gates Closed	15	72.9	Alessandro Boulevard	45	72.4	74
8a	Gates Open	15	54.0	Overlook Parkway	43	53.3	55
8b	Gates Closed	15	52.4	Overlook Parkway	43	51.7	54
9a	Gates Open	15	58.0	Bradley Street	18	53.6	56
9b	Gates Closed	15	60.4	Bradley Street	18	56.0	58
10a	Gates Open	15	64.1	Overlook Parkway	44	63.5	66
10b	Gates Closed	15	58.9	Overlook Parkway	44	58.3	60
11a	Gates Open	15	63.8	Victoria Avenue	55	64.2	66
11b	Gates Closed	15	64.4	Victoria Avenue	55	64.8	67
12a	Gates Open	15	62.0	Madison Street	20	58.0	60
12b	Gates Closed	15	59.5	Madison Street	20	55.5	58
13a	Gates Open	15	72.0	Washington Street	30	69.8	72
13b	Gates Closed	15	72.8	Washington Street	30	70.6	73

Shaded text represents exceedance of City standards.
*All land uses where measurements were taken are “residential”, thus any measurement greater than 65 CNEL is considered to exceed City standards.

- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project vicinity to excessive noise levels.

3.10.4 Issue 1: Noise Exposure

Would the proposed project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

3.10.4.1 Impact Analysis

The following analysis is based on worst-case future traffic volumes on all study area roadways as calculated in the TIA.

a. Future Traffic Noise – Existing Roadways

To determine the potential noise impacts due to each of the proposed scenarios on existing roadways, first the potential difference in future noise levels between each of the scenarios and the assumed baselines were calculated. Then, where it is found that the anticipated noise increase is 1 dB or more, the future noise level at 50 feet from the roadway was calculated and compared to the noise compatibility criteria shown in Table 3.10-1.

The study area used in this noise analysis is the same as the study area used in the traffic analysis (see Figure 2-2). Each scenario would affect vehicle traffic patterns on road segments in this Project vicinity. As noted above, future traffic volumes from the TIA are based on worst-case conditions. Traffic information for the Project was obtained from ITERIS, Inc. (2012). Traffic speeds and volumes for each roadway segment in the Project vicinity were provided for each scenario. The traffic mix assumed for each roadway segment was based on field traffic counts taken in and around the Project vicinity during the noise measurements. The average traffic mix count was 98.1 percent autos, 0.2 percent motorcycles, 0.5 percent buses, 1.0 percent medium trucks, and 0.2 percent heavy trucks.

The total existing traffic volume in Riverside County is 5,531,645 Average Daily Traffic (ADT), and the total projected buildout traffic volume in Riverside County is 11,222,346 ADT (ITERIS, Inc. 2012). The increase in ADT from existing to buildout is due to population growth in the region. The four scenarios consider traffic controls and distribution on roadways, but do not propose development that would generate new or additional trips. Therefore, the Project would not result in an increase in ADT to the roadway network, and the existing and future total traffic volumes in the region are the same for each scenario. However, each scenario would affect vehicle traffic patterns and overall trip length in the Project vicinity. The following is an analysis of the change in

noise levels due to the change in traffic patterns that would occur under each proposed scenario.

Gates Closed Baseline

Note that for the Gates Closed baseline, Crystal View Terrace and Green Orchard Place are treated separately under the New and Gated Roadways section below. This is because there would not be traffic on portions of these roadways with the gates closed under Scenario 1, while Scenarios 2, 3, and 4 would redistribute traffic on these roadways.

Scenario 1

Under Scenario 1, the gates at Crystal View Terrace and Green Orchard Place would remain closed. This scenario is equivalent to the Gates Closed baseline. Therefore, there is no difference in traffic volumes or noise levels between Scenario 1 and the Gates Closed baseline. Because there is no change between existing conditions and Scenario 1, traffic noise impacts would be **less than significant**.

Scenario 2

Under Scenario 2, the gates at Crystal View Terrace and Green Orchard Place would be removed. The change in noise levels between Scenario 2 and the Gates Closed baseline were calculated for the roadways in the Project vicinity. Table 3.10-4 shows those 32 roadways that would experience a noise increase of 1 dB or greater as a result of Scenario 2.

To determine the potential impacts due to these noise increases, the noise levels at 50 feet were calculated for each roadway segment and compared to City of Riverside criteria. As shown by shading on Table 3.10-4, residential uses adjacent to the following single roadway segment are projected to be exposed to future traffic noise levels greater than 65 CNEL:

- Overlook Parkway between Orozco Drive and Golden Star Avenue (66 CNEL)

However, there are existing walls located along this segment of Overlook Parkway that were not taken into account in the calculations above. These walls were constructed as reverse frontage walls and are approximately six feet high. Assuming flat-site conditions, it was calculated that this wall provides approximately a five dB reduction in traffic noise levels at the adjacent residences. Therefore, after taking the existing wall into account, future noise levels at residential uses adjacent to this roadway segment would be less than 65 CNEL. Because walls are already in place adjacent to this segment of Overlook Parkway, impacts at these residences due to Scenario 2 would be **less than significant**.

TABLE 3.10-4
FUTURE NOISE LEVELS FOR SCENARIO 2 ROADWAYS WITH NOISE LEVEL INCREASES OF 1 dB OR MORE COMPARED TO GATES CLOSED BASELINE

Roadway Segment	From	To	Gates Closed Volume	Scenario 2 Volume	Change in dB	Noise Level at 50 Feet (CNEL)	Adjacent Land Use	Noise/Land Use Compatibility Criteria (CNEL)*
Berry Road	Crystal View Terrace	Via Vista Drive	2,814	5,399	2.8	58	Residential	65
Berry Road	Via Vista Drive	Bush Avenue	496	3,594	8.6	57	Residential	65
Berry Road	Bush Avenue	Trautwein Road	582	3,639	8.0	57	Residential	65
Cactus Avenue	Green Orchard Place	Harrington Road	2,619	4,621	2.5	61	Residential	65
Cactus Avenue	Harrington Road	Dauchy Avenue	2,485	4,318	2.4	61	Residential	65
Dauchy Avenue	Privada Lane	Cactus Avenue	2,485	4,318	2.4	61	Residential	65
Dufferin Avenue	Grace Street	Madison Street	806	1,016	1.0	58	Residential	65
Dufferin Avenue	Madison Street	Washington Street	2,886	3,708	1.1	64	Residential	65
Gainsborough Drive	Orozco Drive	Westminster Drive	773	2,022	4.2	56	Residential	65
Gainsborough Drive	Westminster Drive	Hawarden Drive	1,382	2,578	2.7	57	Residential	65
Green Orchard Place	Kingdom Drive	Peak Court	353	2,565	8.6	59	Residential	65
Hawarden Drive	Overlook Parkway	Skye Drive	432	772	2.5	52	Residential	65
Hawarden Drive	Skye Drive	Mary Street	1,139	1,422	1.0	54	Residential	65
Hawarden Drive	Mary Street	De Grazia Road	2,416	3,407	1.5	58	Residential	65
Hawarden Drive	De Grazia Road	Gainsborough Drive	1,351	2,439	2.6	57	Residential	65
John F Kennedy Drive	Dauchy Avenue	Rancho Valencia Drive	2,702	3,937	1.6	62	Residential	65
John F Kennedy Drive	Rancho Valencia Drive	Wood Road	3,247	4,859	1.8	63	Residential	65
Kingdom Drive	Harbart Drive	Crystal Mountain Circle	302	446	1.7	51	Residential	65
Kingdom Drive	Crystal Mountain Circle	Green Orchard Place	782	1,068	1.4	55	Residential	65
Kingdom Drive	Green Orchard Place	Overlook Parkway	1,127	3,358	4.7	60	Residential	65
Mary Street	Hawarden Drive	Frances Street	3,323	4,702	1.5	60	Residential	65
Orozco Drive	Overlook Parkway	Westminster Drive	1,171	2,492	3.3	57	Residential	65
Overlook Parkway	Washington Street	Alton Way	3,478	7,120	3.1	65	Residential	65
Overlook Parkway	Alton Way	Hawarden Drive	3,206	6,925	3.3	61	Residential	65
Overlook Parkway	Hawarden Drive	Ocotillo Drive	2,213	6,370	4.6	64	Residential	65
Overlook Parkway	Ocotillo Drive	Orozco Drive	2,213	6,370	4.6	64	Residential	65
Overlook Parkway	Orozco Drive	Golden Star Avenue	2,719	8,394	4.9	66	Residential	65
Overlook Parkway	Golden Star Avenue	Wyndham Hill Drive	1,998	7,767	5.9	65	Residential	65
Overlook Parkway	Wyndham Hill Drive	Bodewin Court	1,319	7,289	7.4	65	Residential	65
Overlook Parkway	Bodewin Court	Chateau Ridge Lane	1,153	7,172	7.9	65	Residential	65
Overlook Parkway	Chateau Ridge Lane	Kingdom Drive	1,175	7,203	7.9	65	Residential	65
Overlook Parkway	Kingdom Drive	Miracle Mile	69	4,911	18.5	63	Residential	65

*Conditionally acceptable noise limit
Shaded text represents exceedance of conditionally acceptable noise limit.

It should be noted that because Scenario 2 would result in a redistribution of traffic patterns on area roadways and because the total ADT in the region would remain unchanged, some roadways would experience a decrease in traffic, and thus a decrease in noise levels. It was calculated that noise levels would decrease on 70 of the 176 analyzed existing roadway segments in the Project vicinity when compared to the Gates Closed baseline.

Scenario 3

Under Scenario 3, the gates at Crystal View Terrace and Green Orchard Place would be removed and Overlook Parkway would be connected between Via Vista Drive and Sandtrack Road. The change in noise levels between Scenario 3 and the Gates Closed baseline were calculated for the roadways in the Project vicinity. Table 3.10-5 shows those 42 roadways that would experience a noise increase of 1 dB or greater as a result of Scenario 3. As discussed previously, 3 dB is considered a perceptible change in noise; however, for comparison with City noise standards, future noise impacts were determined for all roadways that have a potential 1 dB or greater increase.

To determine the potential impacts due to these noise increases, the noise levels at 50 feet were calculated for each roadway segment and compared to the City's criteria. As shown by shading on Table 3.10-5, residential uses adjacent to the following 14 roadway segments would be exposed to future traffic noise levels greater than 65 CNEL:

- Madison Street between:
    - Victoria Avenue and Santa Rosa Way (67 CNEL)
    - Santa Rosa Way and Lincoln Avenue (67 CNEL)

- Overlook Parkway between:
    - Washington Street and Alton Way (69 CNEL)
    - Alton Way and Hawarden Drive (69 CNEL)
    - Hawarden Drive and Ocotillo Drive (68 CNEL)
    - Ocotillo Drive and Orozco Drive (68 CNEL)
    - Orozco Drive and Golden Star Avenue (69 CNEL)
    - Golden Star Avenue and Wyndham Hill Drive (69 CNEL)
    - Wyndham Hill Drive and Bodewin Court (69 CNEL)
    - Bodewin Court and Chateau Ridge Lane (69 CNEL)
    - Chateau Ridge Lane and Kingdom Drive (69 CNEL)
    - Kingdom Hill Drive and Miracle Mile (69 CNEL)
    - Sandtrack Road and Alessandro Boulevard (69 CNEL)

- Washington Street between Overlook Parkway and Engel Drive (73 CNEL)

TABLE 3.10-5
FUTURE NOISE LEVELS FOR SCENARIO 3 ROADWAYS WITH NOISE LEVEL INCREASES OF 1 dB OR MORE COMPARED TO GATES CLOSED BASELINE

Roadway Segment	From	To	Gates Closed Volume	Scenario 3 Volume	Change in dB	Noise Level at 50 Feet (CNEL)	Adjacent Land Use	Noise/Land Use Compatibility Criteria (CNEL)*
Berry Road	Crystal View Terrace	Via Vista Drive	2,814	3,615	1.1	57	Residential	65
Berry Road	Via Vista Drive	Bush Avenue	496	1,546	4.9	53	Residential	65
Berry Road	Bush Avenue	Trautwein Road	582	1,550	4.3	53	Residential	65
Cactus Avenue	Green Orchard Place	Harrington Road	2,619	3,915	1.7	61	Residential	65
Cactus Avenue	Harrington Road	Dauchy Avenue	2,485	3,569	1.6	60	Residential	65
Dauchy Avenue	Privada Lane	Cactus Avenue	2,485	3,569	1.6	60	Residential	65
Dufferin Avenue	Grace Street	Madison Street	806	1,524	2.8	60	Residential	65
Dufferin Avenue	Madison Street	Washington Street	2,886	5,551	2.8	65	Residential	65
Gainsborough Drive	Orozco Drive	Westminster Drive	773	2,209	4.6	56	Residential	65
Gainsborough Drive	Westminster Drive	Hawarden Drive	1,382	2,833	3.1	57	Residential	65
Golden Star Avenue	Valle Vista Way	Highridge Street	945	1,475	1.9	55	Residential	65
Golden Star Avenue	Highridge Street	Bradley Street	1,659	2,213	1.3	56	Residential	65
Harbart Drive	Bradley Street	Alpine Meadows Lane	599	2,398	6.0	58	Residential	65
Hawarden Drive	Overlook Parkway	Skye Drive	432	734	2.3	51	Residential	65
Hawarden Drive	Mary Street	De Grazia Road	2,416	3,554	1.7	58	Residential	65
Hawarden Drive	De Grazia Road	Gainsborough Drive	1,351	2,638	2.9	57	Residential	65
John F Kennedy Drive	Rancho Valencia Drive	Wood Road	3,247	4,172	1.1	63	Residential	65
Kingdom Drive	Harbart Drive	Crystal Mountain Circle	302	2,191	8.6	58	Residential	65
Kingdom Drive	Crystal Mountain Circle	Green Orchard Place	782	2,822	5.6	59	Residential	65
Kingdom Drive	Green Orchard Place	Overlook Parkway	1,127	4,610	6.1	61	Residential	65
Madison Street	Dufferin Avenue	Cleveland Avenue	3,066	5,001	2.1	60	Residential	65
Madison Street	Washington Street	Victoria Avenue	3,066	5,001	2.1	60	Residential	65
Madison Street	Victoria Avenue	Santa Rosa Way	10,010	12,921	1.1	67	Residential	65
Madison Street	Santa Rosa Way	Lincoln Avenue	10,010	12,921	1.1	67	Residential	65
Mary Street	Hawarden Drive	Frances Street	3,323	4,773	1.6	60	Residential	65
Orozco Drive	Overlook Parkway	Westminster Drive	1,171	2,621	3.5	57	Residential	65
Overlook Parkway	Washington Street	Alton Way	3,478	16,786	6.8	69	Residential	65
Overlook Parkway	Alton Way	Hawarden Drive	3,206	16,789	7.2	69	Residential	65
Overlook Parkway	Hawarden Drive	Ocotillo Drive	2,213	16,146	8.6	68	Residential	65
Overlook Parkway	Ocotillo Drive	Orozco Drive	2,213	16,146	8.6	68	Residential	65

TABLE 3.10-5
FUTURE NOISE LEVELS FOR SCENARIO 3 ROADWAYS WITH NOISE LEVEL INCREASES OF 1 dB OR MORE COMPARED TO GATES CLOSED BASELINE (cont.)

Roadway Segment	From	To	Gates Closed Volume	Scenario 3 Volume	Change in dB	Noise Level at 50 Feet (CNEL)	Adjacent Land Use	Noise/Land Use Compatibility Criteria (CNEL)*
Overlook Parkway	Orozco Drive	Golden Star Avenue	2,719	18,586	8.3	69	Residential	65
Overlook Parkway	Golden Star Avenue	Wyndham Hill Drive	1,998	18,094	9.6	69	Residential	65
Overlook Parkway	Wyndham Hill Drive	Bodewin Court	1,319	17,699	11.3	69	Residential	65
Overlook Parkway	Bodewin Court	Chateau Ridge Lane	1,153	17,626	11.8	69	Residential	65
Overlook Parkway	Chateau Ridge Lane	Kingdom Drive	1,175	17,668	11.8	69	Residential	65
Overlook Parkway	Kingdom Drive	Miracle Mile	69	18,070	24.2	69	Residential	65
Overlook Parkway	Sandtrack Road	Alessandro Boulevard	2,594	18,268	8.5	69	Residential	65
Victoria Avenue	Adams Street	St Lawrence Street	3,113	4,553	1.7	64	Residential	65
Victoria Avenue	St Lawrence Street	Jefferson Street	3,796	5,329	1.5	65	Residential	65
Victoria Avenue	Jefferson Street	Grace Street	3,970	5,232	1.2	65	Residential	65
Victoria Avenue	Grace Street	Madison Street	4,516	5,734	1.0	65	Residential	65
Washington Street	Overlook Parkway	Engel Drive	37,950	47,672	1.0	73	Residential	65

*Conditionally acceptable noise limit
Shaded text represents exceedance of conditionally acceptable noise limit.

However, as discussed above, there are existing walls located along the segments of Overlook Parkway that were not taken into account in the calculations above. Assuming flat-site conditions, it was calculated that this wall provides approximately a five dB reduction in traffic noise levels, reducing noise levels to less than 65 CNEL. Therefore, because walls are already in place adjacent to these segments of Overlook Parkway, impacts at these residences due to Scenario 3 would be **less than significant**.

There are also existing walls adjacent to this segment of Washington Street. These walls would reduce noise levels adjacent to Washington Street, but not to a level less than significant. The walls would reduce levels to 68 CNEL on Washington Street between Overlook Parkway and Engel Drive; however, impacts at these residences would be **significant (S3-NOS-1).**

There are no existing walls constructed on Madison Street between Victoria Avenue and Lincoln Avenue. Impacts at these Madison Street residences due to Scenario 3 would be **significant (S3-NOS-1).**

It should be noted that, like Scenario 2, Scenario 3 would redistribute traffic, and some roadways would experience a decrease in traffic, and thus a decrease in noise levels. It was calculated that noise levels would decrease on 69 of the 176 analyzed existing roadway segments in the Project vicinity when compared to the Gates Closed baseline.

Scenario 4

Under Scenario 4, the gates at Crystal View Terrace and Green Orchard Place would be removed, Overlook Parkway would be connected between Via Vista Drive and Sandtrack Road, and the Proposed C Street would be constructed west of Washington Street. The change in noise levels between Scenario 4 and the Gates Closed baseline were calculated for the roadways in the Project vicinity. Table 3.10-6 shows those 45 roadways that would experience a noise increase of 1 dB or greater as a result of Scenario 4.

TABLE 3.10-6
FUTURE NOISE LEVELS FOR SCENARIO 4 ROADWAYS WITH NOISE LEVEL INCREASES OF 1 dB OR MORE COMPARED TO GATES CLOSED BASELINE

Roadway Segment	From	To	Gates Closed Volume	Scenario 4 Volume	Change in dB	Noise Level at 50 Feet (CNEL)	Adjacent Land Use	Noise/Land Use Compatibility Criteria (CNEL)*
Berry Road	Crystal View Terrace	Via Vista Drive	2,814	3,786	1.3	57	Residential	65
Berry Road	Via Vista Drive	Bush Avenue	496	1,661	5.2	53	Residential	65
Berry Road	Bush Avenue	Trautwein Road	582	1,642	4.5	53	Residential	65
Cactus Avenue	Green Orchard Place	Harrington Road	2,619	4,151	2.0	61	Residential	65
Cactus Avenue	Harrington Road	Dauchy Avenue	2,485	3,796	1.8	60	Residential	65
Dauchy Avenue	Privada Lane	Cactus Avenue	2,485	3,796	1.8	60	Residential	65
Gainsborough Drive	Orozco Drive	Westminster Drive	773	2,169	4.5	56	Residential	65
Gainsborough Drive	Westminster Drive	Hawarden Drive	1,382	2,706	2.9	57	Residential	65
Golden Star Avenue	Valle Vista Way	Highridge Street	945	1,505	2.0	55	Residential	65
Golden Star Avenue	Highridge Street	Bradley Street	1,659	2,253	1.3	56	Residential	65
Harbart Drive	Bradley Street	Alpine Meadows Lane	599	2,480	6.2	59	Residential	65
Hawarden Drive	Overlook Parkway	Skye Drive	432	1,885	6.4	56	Residential	65
Hawarden Drive	Skye Drive	Mary Street	1,139	2,478	3.4	57	Residential	65
Hawarden Drive	Mary Street	De Grazia Road	2,416	3,430	1.5	58	Residential	65
Hawarden Drive	De Grazia Road	Gainsborough Drive	1,351	2,514	2.7	57	Residential	65
John F Kennedy Drive	Dauchy Avenue	Rancho Valencia Drive	2,702	3,426	1.0	62	Residential	65
John F Kennedy Drive	Rancho Valencia Drive	Wood Road	3,247	4,355	1.3	63	Residential	65
Kingdom Drive	Harbart Drive	Crystal Mountain Circle	302	2,287	8.8	58	Residential	65
Kingdom Drive	Crystal Mountain Circle	Green Orchard Place	782	2,937	5.7	59	Residential	65
Kingdom Drive	Green Orchard Place	Overlook Parkway	1,127	4,873	6.4	62	Residential	65
Madison Street	Washington Street	Victoria Avenue	3,066	32,380	10.2	68	Residential	65
Madison Street	Victoria Avenue	Santa Rosa Way	10,010	27,126	4.3	71	Residential	65
Madison Street	Santa Rosa Way	Lincoln Avenue	10,010	27,126	4.3	71	Residential	65
Madison Street	Lincoln Avenue	Peters Street	13,991	25,612	2.6	72	Residential/Commercial	65/75
Madison Street	Peters Street	Diamond Street	13,991	25,612	2.6	72	Residential/Commercial	65/75
Madison Street	Diamond Street	Railroad Avenue	18,696	30,231	2.1	73	Residential/Commercial	65/75
Madison Street	Railroad Avenue	Indiana Avenue	16,813	28,058	2.2	72	Commercial	75
Mary Street	Hawarden Drive	Frances Street	3,323	5,814	2.4	61	Residential	65
Orozco Drive	Overlook Parkway	Westminster Drive	1,171	2,668	3.6	57	Residential	65
Overlook Parkway	Washington Street	Alton Way	3,478	21,362	7.9	70	Residential	65
Overlook Parkway	Alton Way	Hawarden Drive	3,206	21,447	8.3	70	Residential	65

TABLE 3.10-6
FUTURE NOISE LEVELS FOR SCENARIO 4 ROADWAYS WITH NOISE LEVEL INCREASES OF 1 dB OR MORE COMPARED TO GATES CLOSED BASELINE (cont.)

Roadway Segment	From	To	Gates Closed Volume	Scenario 4 Volume	Change in dB	Noise Level at 50 Feet (CNEL)	Adjacent Land Use	Noise/Land Use Compatibility Criteria (CNEL)*
Overlook Parkway	Hawarden Drive	Ocotillo Drive	2,213	19,461	9.4	69	Residential	65
Overlook Parkway	Ocotillo Drive	Orozco Drive	2,213	19,461	9.4	69	Residential	65
Overlook Parkway	Orozco Drive	Golden Star Avenue	2,719	21,762	9.0	70	Residential	65
Overlook Parkway	Golden Star Avenue	Wyndham Hill Drive	1,998	21,255	10.3	70	Residential	65
Overlook Parkway	Wyndham Hill Drive	Bodewin Court	1,319	20,843	12.0	70	Residential	65
Overlook Parkway	Bodewin Court	Chateau Ridge Lane	1,153	20,768	12.6	70	Residential	65
Overlook Parkway	Chateau Ridge Lane	Kingdom Drive	1,175	20,809	12.5	70	Residential	65
Overlook Parkway	Kingdom Drive	Miracle Mile	69	21,113	24.8	70	Residential	65
Overlook Parkway	Sandtrack Road	Alessandro Boulevard	2,594	21,025	9.1	70	Residential	65
Victoria Avenue	Adams Street	St Lawrence Street	3,113	6,243	3.0	66	Residential	65
Victoria Avenue	St Lawrence Street	Jefferson Street	3,796	7,157	2.8	66	Residential	65
Victoria Avenue	Jefferson Street	Grace Street	3,970	7,347	2.7	67	Residential	65
Victoria Avenue	Grace Street	Madison Street	4,516	8,012	2.5	67	Residential	65
Washington Street	Overlook Parkway	Engel Drive	37,950	51,664	1.3	73	Residential	65

*Conditionally acceptable noise limit
Shaded text represents exceedance of conditionally acceptable noise limit.

To determine the potential impacts due to these noise increases, the noise levels at 50 feet were calculated for each roadway segment and compared to City of Riverside criteria. As shown by shading on Table 3.10-6, residential uses adjacent to the following 22 roadway segments would be exposed to future traffic noise levels greater than 65 CNEL:

- Madison Street between:
    - Washington Street and Victoria Avenue (68 CNEL)
    - Victoria Avenue and Santa Rosa Way (71 CNEL)
    - Santa Rosa Way and Lincoln Avenue (71 CNEL)
    - Lincoln Avenue and Peters Street (72 CNEL)
    - Peters Street and Diamond Street (72 CNEL)
    - Diamond Street and Railroad Avenue (73 CNEL)

- Overlook Parkway between:
    - Washington Street and Alton Way (70 CNEL)
    - Alton Way and Hawarden Drive (70 CNEL)
    - Hawarden Drive and Ocotillo Drive (69 CNEL)
    - Ocotillo Drive and Orozco Drive (69 CNEL)
    - Orozco Drive and Golden Star Avenue (70 CNEL)
    - Golden Star Avenue and Wyndham Hill Drive (70 CNEL)
    - Wyndham Hill Drive and Bodewin Court (70 CNEL)
    - Bodewin Court and Chateau Ridge Lane (70 CNEL)
    - Chateau Ridge Lane and Kingdom Drive (70 CNEL)
    - Kingdom Hill Drive and Miracle Mile (70 CNEL)
    - Sandtrack Road and Alessandro Boulevard (70 CNEL)

- Victoria Avenue between:
    - Adams Street and St. Lawrence Street (66 CNEL)
    - St. Lawrence Street and Jefferson Street (66 CNEL)
    - Jefferson Street and Grace Street (67 CNEL)
    - Grace Street and Madison Street (67 CNEL)

- Washington Street between Overlook Parkway and Engel Drive (73 CNEL)

There are existing walls located adjacent to these segments of Overlook Parkway, Victoria Avenue, and Washington Street, which provide an approximate 5 dB reduction. Therefore, these walls would reduce noise levels to 65 CNEL or less on Overlook Parkway and Victoria Avenue. Because walls are already in place adjacent to these segments, impacts at these residences due to Scenario 4 would be **less than significant**.

Similar to Scenario 3, existing walls would reduce noise levels at residences adjacent to Washington Street, but not to a level less than significant. The walls would reduce levels to 68 CNEL on Washington Street between Overlook Parkway and Engel Drive. Impacts at these residences would be **significant (S4-NOS-1).**

There are no existing walls constructed on Madison Street between Washington Street and Railroad Avenue. Impacts at these Madison Street residences due to Scenario 4 would be **significant (S4-NOS-1).**

Similar to Scenarios 2 and 3, Scenario 4 would redistribute traffic and some roadways would experience a decrease in traffic and thus a decrease in noise levels. It was calculated that noise levels would decrease on 101 of the 176 analyzed existing roadway segments in the Project vicinity when compared to the Gates Closed baseline.

Gates Open Baseline

Scenario 1

The change in noise levels between Scenario 1 and the Gates Open baseline were calculated for the roadways in the Project vicinity. Table 3.10-7 shows those 12 roadways that would experience a noise increase of 1 dB or greater as a result of Scenario 1.

To determine the potential impacts due to these noise increases, the noise levels at 50 feet were calculated for each roadway segment and compared to City of Riverside criteria. As shown, noise levels would be less than the 65 CNEL residential standard at all affected roadway segments. Impacts due to Scenario 1 would be **less than significant**.

As noted above, some roadways would experience a decrease in traffic and thus a decrease in noise levels. It was calculated that noise levels would decrease on 82 of the 176 analyzed existing roadway segments in the Project vicinity when compared to the Gates Open baseline.

Scenario 2

This scenario is equivalent to the Gates Open baseline. Therefore, there is no difference in traffic volumes or noise levels between Scenario 2 and the Gates Open baseline, and traffic noise impacts would be **less than significant**.

TABLE 3.10-7
FUTURE NOISE LEVELS FOR SCENARIO 1 ROADWAYS WITH NOISE LEVEL INCREASES OF 1 dB OR MORE COMPARED TO GATES OPEN BASELINE

Roadway Segment	From	To	Gates Open Volume	Scenario 1 Volume	Change in dB	Noise Level at 50 Feet (CNEL)	Adjacent Land Use	Noise/Land Use Compatibility Criteria (CNEL)*
Bradley Street	Washington Street	Whitegate Avenue	4,165	5,273	1.0	60	Residential	65
Bradley Street	Whitegate Avenue	Golden Star Avenue	4,250	5,361	1.0	60	Residential	65
Bradley Street	Golden Star Avenue	Silver Hills Drive	2,913	3,713	1.1	60	Residential	65
Bradley Street	Silver Hills Drive	Harbart Drive	2,942	3,778	1.1	60	Residential	65
Corinthian Way	Berry Road	Via Vista Drive	1,980	2,876	1.6	59	Residential	65
Frances Street	Washington Street	Falling Oak Drive	2,740	3,525	1.1	58	Residential	65
Frances Street	Falling Oak Drive	Mary Street	3,318	4,197	1.0	59	Residential	65
Via Vista Drive	Corinthian Way	Overlook Parkway	1,981	2,923	1.7	56	Residential	65
Via Vista Drive	Overlook Parkway	Canyon Hill Drive	1,981	2,923	1.7	56	Residential	65
Via Vista Drive	Canyon Hill Drive	Vista View Terrace	1,888	2,823	1.7	56	Residential	65
Via Vista Drive	Vista View Terrace	Old Bridge Road	1,888	2,823	1.7	56	Residential	65
Via Vista Drive	Old Bridge Road	Alessandro Boulevard	2,198	3,125	1.5	56	Residential	65

*Conditionally acceptable limit

Scenario 3

The change in noise levels between Scenario 3 and the Gates Closed baseline were calculated for the roadways in the Project vicinity. Table 3.10-8 shows those 27 roadways that would experience a noise increase of 1 dB or greater as a result of Scenario 3.

To determine the potential impacts due to these noise increases, the noise levels at 50 feet were calculated for each roadway segment and compared to City of Riverside criteria. As shown by shading on Table 3.10-8, residential uses adjacent to the following 12 roadway segments would be exposed to future traffic noise levels greater than 65 CNEL:

- Overlook Parkway between:
    - Washington Street and Alton Way (69 CNEL)
    - Alton Way and Hawarden Drive (69 CNEL)
    - Hawarden Drive and Ocotillo Drive (68 CNEL)
    - Ocotillo Drive and Orozco Drive (68 CNEL)
    - Orozco Drive and Golden Star Avenue (69 CNEL)
    - Golden Star Avenue and Wyndham Hill Drive (69 CNEL)
    - Wyndham Hill Drive and Bodewin Court (69 CNEL)
    - Bodewin Court and Chateau Ridge Lane (69 CNEL)
    - Chateau Ridge Lane and Kingdom Drive (69 CNEL)
    - Kingdom Hill Drive and Miracle Mile (69 CNEL)
    - Miracle Mile and Crystal View Terrace (69 CNEL)
    - Sandtrack Road and Alessandro Boulevard (69 CNEL)

As discussed above, there are existing walls located along these segments of Overlook Parkway that would reduce noise levels to 65 CNEL or less. Therefore, impacts at these residences due to Scenario 3 would be **less than significant**.

As noted above, some roadways would experience a decrease in traffic and thus a decrease in noise levels. It was calculated that noise levels would decrease on 72 of the 176 analyzed existing roadway segments in the Project vicinity when compared to the Gates Open baseline.

Scenario 4

The change in noise levels between Scenario 4 and the Gates Closed baseline were calculated for the roadways in the Project vicinity. Table 3.10-9 shows those 34 roadways that would experience a noise increase of 1 dB or greater as a result of Scenario 4.

TABLE 3.10-8
FUTURE NOISE LEVELS FOR SCENARIO 3 ROADWAYS WITH NOISE LEVEL INCREASES OF 1 dB OR MORE COMPARED TO GATES OPEN BASELINE

Roadway Segment	From	To	Gates Open Volume	Scenario 3 Volume	Change in dB	Noise Level at 50 Feet (CNEL)	Adjacent Land Use	Noise/Land Use Compatibility Criteria (CNEL)*
Bradley Street	Golden Star Avenue	Silver Hills Drive	2,913	4,013	1.4	61	Residential	65
Bradley Street	Silver Hills Drive	Harbart Drive	2,942	4,014	1.3	61	Residential	65
Dufferin Avenue	Jefferson Street	Grace Street	1,187	1,709	1.6	60	Residential	65
Dufferin Avenue	Grace Street	Madison Street	1,016	1,524	1.8	60	Residential	65
Dufferin Avenue	Madison Street	Washington Street	3,708	5,551	1.8	65	Residential	65
Golden Star Avenue	Valle Vista Way	Highridge Street	895	1,475	2.2	55	Residential	65
Golden Star Avenue	Highridge Street	Bradley Street	1,602	2,213	1.4	56	Residential	65
Harbart Drive	Bradley Street	Alpine Meadows Lane	627	2,398	5.8	58	Residential	65
Kingdom Drive	Harbart Drive	Crystal Mountain Circle	446	2,191	6.9	58	Residential	65
Kingdom Drive	Crystal Mountain Circle	Green Orchard Place	1,068	2,822	4.2	59	Residential	65
Kingdom Drive	Green Orchard Place	Overlook Parkway	3,358	4,610	1.4	61	Residential	65
Madison Street	Dufferin Avenue	Cleveland Avenue	3,675	5,001	1.3	60	Residential	65
Madison Street	Washington Street	Victoria Avenue	3,675	5,001	1.3	60	Residential	65
Overlook Parkway	Washington Street	Alton Way	7,120	16,786	3.7	69	Residential	65
Overlook Parkway	Alton Way	Hawarden Drive	6,925	16,789	3.8	69	Residential	65
Overlook Parkway	Hawarden Drive	Ocotillo Drive	6,370	16,146	4.0	68	Residential	65
Overlook Parkway	Ocotillo Drive	Orozco Drive	6,370	16,146	4.0	68	Residential	65
Overlook Parkway	Orozco Drive	Golden Star Avenue	8,394	18,586	3.5	69	Residential	65
Overlook Parkway	Golden Star Avenue	Wyndham Hill Drive	7,767	18,094	3.7	69	Residential	65
Overlook Parkway	Wyndham Hill Drive	Bodewin Court	7,289	17,699	3.9	69	Residential	65
Overlook Parkway	Bodewin Court	Chateau Ridge Lane	7,172	17,626	3.9	69	Residential	65
Overlook Parkway	Chateau Ridge Lane	Kingdom Drive	7,203	17,668	3.9	69	Residential	65
Overlook Parkway	Kingdom Drive	Miracle Mile	4,911	18,070	5.7	69	Residential	65
Overlook Parkway	Miracle Mile	Crystal View Terrace	4,908	18,093	5.7	69	Residential	65
Overlook Parkway	Sandtrack Road	Alessandro Boulevard	2,596	18,268	8.5	69	Residential	65
Victoria Avenue	Adams Street	St Lawrence Street	3,559	4,553	1.1	64	Residential	65
Victoria Avenue	St Lawrence Street	Jefferson Street	4,268	5,329	1.0	65	Residential	65

*Conditionally acceptable limit
Shaded text represents exceedance of conditionally acceptable noise limit.

To determine the potential impacts due to these noise increases, the noise levels at 50 feet were calculated for each roadway segment and compared to the City's criteria. As shown by shading on Table 3.10-9, residential uses adjacent to the following 24 roadway segments would be exposed to future traffic noise levels greater than 65 CNEL:

- Madison Street between:
    - Washington and Victoria (68 CNEL)
    - Victoria Avenue and Santa Rosa Way (71 CNEL)
    - Santa Rosa Way and Lincoln Avenue (71 CNEL)
    - Lincoln Avenue and Peters Street (72 CNEL)
    - Peters Street and Diamond Street (72 CNEL)
    - Diamond Street and Railroad Avenue (73 CNEL)
    - Railroad Avenue and Indiana Avenue (72 CNEL)

- Overlook Parkway between:
    - Washington Street and Alton Way (70 CNEL)
    - Alton Way and Hawarden Drive (70 CNEL)
    - Hawarden Drive and Ocotillo Drive (69 CNEL)
    - Ocotillo Drive and Orozco Drive (69 CNEL)
    - Orozco Drive and Golden Star Avenue (70 CNEL)
    - Golden Star Avenue and Wyndham Hill Drive (70 CNEL)
    - Wyndham Hill Drive and Bodewin Court (70 CNEL)
    - Bodewin Court and Chateau Ridge Lane (70 CNEL)
    - Chateau Ridge Lane and Kingdom Drive (70 CNEL)
    - Kingdom Hill Drive and Miracle Mile (70 CNEL)
    - Miracle Mile and Crystal View Terrace (70 CNEL)
    - Sandtrack Road and Alessandro Boulevard (70 CNEL)

- Victoria Avenue between:
    - Adams Street and St. Lawrence Street (66 CNEL)
    - St. Lawrence Street and Jefferson Street (66 CNEL)
    - Jefferson Street and Grace Street (67 CNEL)
    - Grace Street and Madison Street (67 CNEL)

- Washington Street between Overlook Parkway and Engel Drive (73 CNEL)

As discussed above, there are existing walls located adjacent to these segments of Overlook Parkway, Victoria Avenue, and Washington Street. These walls would reduce noise levels to 65 CNEL or less at residences adjacent to Overlook Parkway and Victoria Avenue. Therefore, impacts at these residences due to Scenario 4 would be **less than significant**.

TABLE 3.10-9
FUTURE NOISE LEVELS FOR SCENARIO 4 ROADWAYS WITH NOISE LEVEL INCREASES OF 1 dB OR MORE COMPARED TO GATES OPEN BASELINE

Roadway Segment	From	To	Gates Open Volume	Scenario 4 Volume	Change in dB	Noise Level at 50 Feet (CNEL)	Adjacent Land Use	Noise/Land Use Compatibility Criteria (CNEL)*
Bradley Street	Golden Star Avenue	Silver Hills Drive	2,913	4,114	1.5	61	Residential	65
Bradley Street	Silver Hills Drive	Harbart Drive	2,942	4,120	1.5	61	Residential	65
Golden Star Avenue	Valle Vista Way	Highridge Street	895	1,505	2.3	55	Residential	65
Golden Star Avenue	Highridge Street	Bradley Street	1,602	2,253	1.5	56	Residential	65
Harbart Drive	Bradley Street	Alpine Meadows Lane	627	2,480	6.0	59	Residential	65
Hawarden Drive	Overlook Parkway	Skye Drive	772	1,885	3.9	56	Residential	65
Hawarden Drive	Skye Drive	Mary Street	1,422	2,478	2.4	57	Residential	65
Kingdom Drive	Harbart Drive	Crystal Mountain Circle	446	2,287	7.1	58	Residential	65
Kingdom Drive	Crystal Mountain Circle	Green Orchard Place	1,068	2,937	4.4	59	Residential	65
Kingdom Drive	Green Orchard Place	Overlook Parkway	3,358	4,873	1.6	62	Residential	65
Madison Street	Washington Street	Victoria Avenue	3,675	32,380	9.5	68	Residential	65
Madison Street	Victoria Avenue	Santa Rosa Way	10,920	27,126	4.0	71	Residential	65
Madison Street	Santa Rosa Way	Lincoln Avenue	10,920	27,126	4.0	71	Residential	65
Madison Street	Lincoln Avenue	Peters Street	14,534	25,612	2.5	72	Residential/Commercial	65/75
Madison Street	Peters Street	Diamond Street	14,534	25,612	2.5	72	Residential/Commercial	65/75
Madison Street	Diamond Street	Railroad Avenue	19,212	30,231	2.0	73	Residential/Commercial	65/75
Madison Street	Railroad Avenue	Indiana Avenue	17,356	28,058	2.1	72	Residential/Commercial	65/75
Overlook Parkway	Washington Street	Alton Way	7,120	21,362	4.8	70	Residential	65
Overlook Parkway	Alton Way	Hawarden Drive	6,925	21,447	4.9	70	Residential	65
Overlook Parkway	Hawarden Drive	Ocotillo Drive	6,370	19,461	4.9	69	Residential	65
Overlook Parkway	Ocotillo Drive	Orozco Drive	6,370	19,461	4.9	69	Residential	65
Overlook Parkway	Orozco Drive	Golden Star Avenue	8,394	21,762	4.1	70	Residential	65
Overlook Parkway	Golden Star Avenue	Wyndham Hill Drive	7,767	21,255	4.4	70	Residential	65
Overlook Parkway	Wyndham Hill Drive	Bodewin Court	7,289	20,843	4.6	70	Residential	65
Overlook Parkway	Bodewin Court	Chateau Ridge Lane	7,172	20,768	4.6	70	Residential	65
Overlook Parkway	Chateau Ridge Lane	Kingdom Drive	7,203	20,809	4.6	70	Residential	65
Overlook Parkway	Kingdom Drive	Miracle Mile	4,911	21,113	6.3	70	Residential	65
Overlook Parkway	Miracle Mile	Crystal View Terrace	4,908	21,134	6.3	70	Residential	65
Overlook Parkway	Sandtrack Road	Alessandro Boulevard	2,596	21,025	9.1	70	Residential	65
Victoria Avenue	Adams Street	St Lawrence Street	3,559	6,243	2.4	66	Residential	65
Victoria Avenue	St Lawrence Street	Jefferson Street	4,268	7,157	2.2	66	Residential	65
Victoria Avenue	Jefferson Street	Grace Street	4,300	7,347	2.3	67	Residential	65
Victoria Avenue	Grace Street	Madison Street	4,826	8,012	2.2	67	Residential	65
Washington Street	Overlook Parkway	Engel Drive	39,969	51,664	1.1	73	Residential	65

*Conditionally acceptable limit

Shaded text represents exceedance of conditionally acceptable noise limit.

Similar to Scenario 3, existing walls would reduce noise levels at residences adjacent to Washington, but not to a level less than significant. The walls would reduce levels to 68 CNEL on Washington Street between Overlook Parkway and Engel Drive. Impacts at these residences would be **significant (S4-NOS-2).**

There are no existing walls constructed on Madison Street between Washington Street and Indiana Avenue. Impacts at these Madison Street residences due to Scenario 4 would be **significant** (**S4-NOS-2**).

As noted above, some roadways would experience a decrease in traffic and thus a decrease in noise levels. It was calculated that noise levels would decrease on 98 of the 176 analyzed existing roadway segments in the Project vicinity when compared to the Gates Open baseline.

Off-site

Mitigation measures identified in the TIA such as signalization, restriping, and repaving for additional turn lanes at key intersections are required in previously developed areas. These off-site improvements would not expose persons to or generate noise levels from future traffic noise (existing roadways) in excess of standards established in the City's General Plan 2025. **No impacts** are identified.

b. Future Traffic Noise – New and Gated Roadways

Three of the proposed scenarios would construct new roadways and/or open existing gated roadways to new pass-through traffic. For these roadways, traffic noise contour distances were calculated, contours were drawn, and noise levels were compared to the City's criteria. The following is an analysis of future noise levels on newly constructed roadways (a portion of Overlook Parkway and Proposed C Street under Scenario 4) and roadways that experience new pass-through traffic (Crystal View Terrace, Green Orchard Place, and portions of Overlook Parkway). The analysis below is the same for both the Gates Closed and the Gates Open baseline.

Scenario 1

No new roadways would be constructed under Scenario 1. The gates on Crystal View Parkway and Green Orchard Place would remain in place and closed, preventing cut-through traffic. There would be **no new noise impacts** under Scenario 1.

Scenario 2

Scenario 2 would remove the gates on Crystal View Terrace and Green Orchard Place, allowing new pass-through traffic on Crystal View Terrace between Green Orchard Place and Overlook Parkway, on Green Orchard Place between Kingdom Drive and

Crystal View Terrace, and on Overlook Parkway between Sandtrack Road and Crystal View Terrace.

To determine the potential impacts due to the pass-through traffic under Scenario 2, noise contour distances were calculated. Table 3.10-10 summarizes the traffic volumes and speeds for these roadway segments and the calculated noise contour distances.

Figure 3.10-1 shows the Scenario 2 noise contours. As shown, future noise levels would be less than the City's residential noise compatibility criteria of 65 CNEL at residences located adjacent to the portions of Crystal View Terrace, Green Orchard Place, and Overlook Parkway that would experience new pass-through traffic after the removal of the gates. Impacts would be **less than significant**.

Scenario 3

Scenario 3 would remove the gates on Crystal View Terrace and Green Orchard Place and construct a new portion of Overlook Parkway between Sandtrack Road and Crystal View Terrace. In addition to creating a new roadway noise source (Overlook Parkway), Scenario 3 would allow new pass-through traffic on Crystal View Terrace and Green Orchard Place. Additionally, as shown in Tables 3.10-6 and 3.10-9, Scenario 3 would add more traffic on existing segments of Overlook Parkway once connected. Therefore, to determine the potential impacts due Scenario 3, noise contour distances were calculated for the newly constructed portion of Overlook Parkway as well as the existing segments of Overlook

Parkway between Alessandro Boulevard and Washington Street , Crystal View Terrace between Green Orchard Place and Overlook Parkway, and Green Orchard Place between Kingdom Drive and Crystal View Terrace.

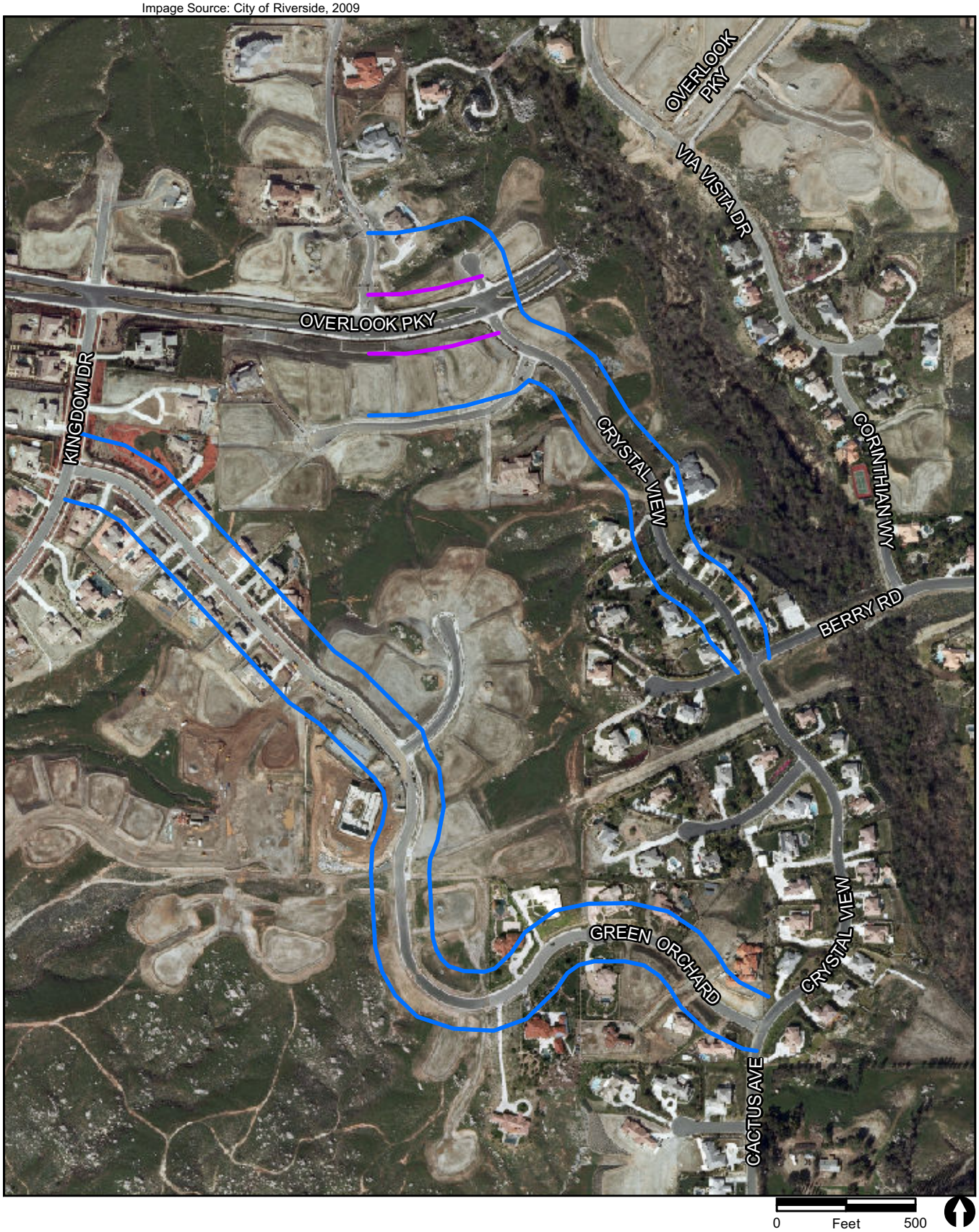
Table 3.10-11 summarizes the traffic volumes and speeds for these roadway segments and the calculated noise contour distances.

Figure 3.10-2 shows the Scenario 3 noise contours. As shown, future noise levels would exceed the City's residential noise compatibility criteria of 65 CNEL at all residences located adjacent to Overlook Parkway between Alessandro Boulevard and Washington Street. However, as discussed above, existing walls have already been constructed in these locations that would reduce noise levels by approximately five dB to 65 CNEL or less. Impacts at these residences would be **less than significant**. As also shown, noise levels at residences adjacent to Crystal View Terrace and Green Orchard Place would be **less than significant**.

TABLE 3.10-10
SCENARIO 2 TRAFFIC NOISE CONTOUR DISTANCES

Roadway Segment	From	To	Speed	Scenario 2 Future Traffic Volume	Distance To (Feet)			
					70	65	60	55
Crystal View Terrace	Green Orchard Place	Berry Road	25	2,396	N/A	N/A	N/A	N/A
Crystal View Terrace	Berry Road	Overlook Parkway	25	4,908	N/A	N/A	N/A	100
Green Orchard Place	Kingdom Drive	Peak Court	35	2,565	N/A	N/A	N/A	122
Green Orchard Place	Peak Court	Crystal View Terrace	35	2,226	N/A	N/A	N/A	105
Overlook Parkway	Miracle Mile	Crystal View Terrace	40	4,908	N/A	N/A	107	328

Impage Source: City of Riverside, 2009



Scenario 2 Noise Contours

55 CNEL

60 CNEL

FIGURE 3.10-1

Scenario 2 Future Traffic Noise Contours

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TABLE 3.10-11
SCENARIO 3 TRAFFIC NOISE CONTOUR DISTANCES

Roadway Segment	From	To	Speed (mph)	Scenario 3 Future Traffic Volume	Distance To (feet)			
					70	65	60	55
Crystal View Terrace	Green Orchard Place	Berry Road	25	2,242	N/A	N/A	N/A	N/A
Crystal View Terrace	Berry Road	Overlook Parkway	25	1,582	N/A	N/A	N/A	N/A
Green Orchard Place	Kingdom Drive	Peak Court	35	1,973	N/A	N/A	N/A	92
Green Orchard Place	Peak Court	Crystal View Terrace	35	1,673	N/A	N/A	N/A	77
Overlook Parkway	Washington Street	Alton Way	40	16,786	N/A	117	353	869
Overlook Parkway	Alton Way	Hawarden Drive	40	16,789	N/A	117	353	868
Overlook Parkway	Hawarden Drive	Ocotillo Drive	40	16,146	N/A	112	341	844
Overlook Parkway	Ocotillo Drive	Orozco Drive	40	16,146	N/A	112	341	844
Overlook Parkway	Orozco Drive	Golden Star Avenue	40	18,586	N/A	130	385	933
Overlook Parkway	Golden Star Avenue	Wyndham Hill Drive	40	18,094	N/A	126	377	915
Overlook Parkway	Wyndham Hill Drive	Bodewin Court	40	17,699	N/A	123	370	901
Overlook Parkway	Bodewin Court	Chateau Ridge Lane	40	17,626	N/A	123	368	899
Overlook Parkway	Chateau Ridge Lane	Kingdom Drive	40	17,668	N/A	123	369	900
Overlook Parkway	Kingdom Drive	Miracle Mile	40	18,070	N/A	126	376	915
Overlook Parkway	Miracle Mile	Crystal View Terrace	40	18,093	N/A	126	377	915
Overlook Parkway	Crystal View Terrace	Existing Western Dead End	40	16,598	N/A	115	350	861
Overlook Parkway	Existing Western Dead End	Via Vista Drive	40	16,598	N/A	115	350	861
Overlook Parkway	Via Vista Drive	Existing Eastern Dead End	40	16,705	N/A	116	352	865
Overlook Parkway	Existing Eastern Dead End	Sandtrack Road	40	16,705	N/A	116	352	865
Overlook Parkway	Sandtrack Road	Alessandro Boulevard	40	18,268	N/A	127	380	922

Scenario 4

Scenario 4 would remove the gates on Crystal View Terrace and Green Orchard Place, construct a new portion of Overlook Parkway between Crystal View Terrace and Sandtrack Road, and construct the Proposed C Street west of Washington Street. In addition to creating new roadway noise sources (Overlook Parkway and Proposed C Street), Scenario 4 would allow new pass-through traffic on Crystal View Terrace and Green Orchard Place. Additionally, as shown in Tables 3.10-7 and 3.10-10, Scenario 4 would add traffic on Overlook Parkway. Therefore, to determine the potential impacts due to Scenario 4, noise contour distances were calculated for the newly constructed portion of Overlook Parkway and the Proposed C Street as well as the existing segments of Overlook Parkway between Alessandro Boulevard and Washington Street, Crystal View Terrace between Green Orchard Place and Overlook Parkway, and Green Orchard Place between Kingdom Drive and Crystal View Terrace.

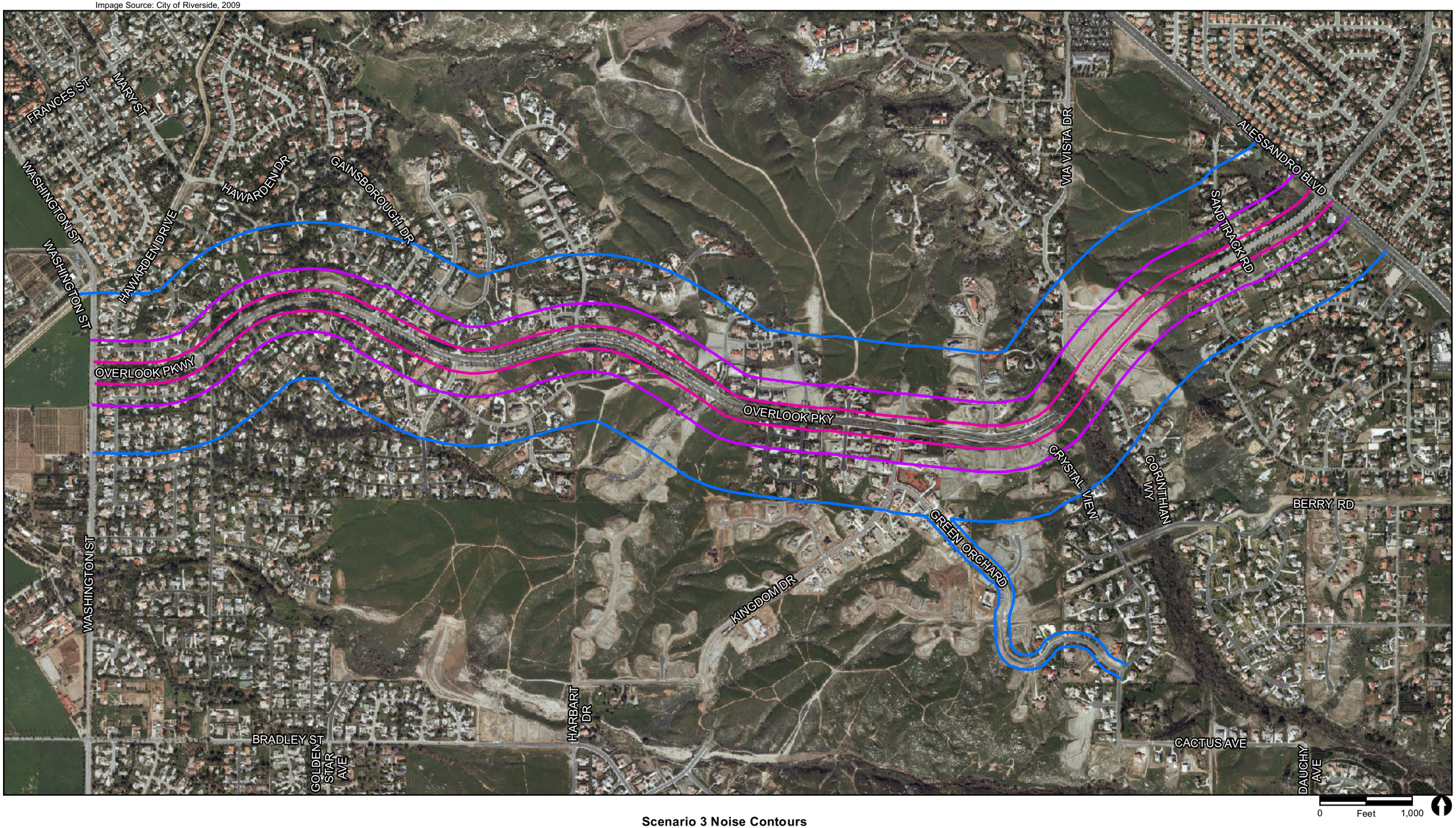
Table 3.10-12 summarizes the traffic volumes and speeds for these roadway segments and the calculated noise contour distances.

Figure 3.10-3 shows the Scenario 4 noise contours. As shown, future noise levels would exceed the City of Riverside residential noise compatibility criteria of 65 CNEL at all residences located adjacent to Overlook Parkway between Alessandro Boulevard and Washington Street. However, as discussed above, existing walls have already been constructed in these locations, and impacts at these locations would be **less than significant**.

TABLE 3.10-12
SCENARIO 4 TRAFFIC NOISE CONTOUR DISTANCES

Roadway Segment	From	To	Speed (mph)	Scenario 4 Future Traffic Volume	Distance To (feet)			
					70	65	60	55
Crystal View Terrace	Green Orchard Place	Berry Road	25	2,329	N/A	N/A	N/A	N/A
Crystal View Terrace	Berry Road	Overlook Parkway	25	1,705	N/A	N/A	N/A	N/A
Green Orchard Place	Kingdom Drive	Peak Court	35	2,130	N/A	N/A	N/A	N/A
Green Orchard Place	Peak Court	Crystal View Terrace	35	1,822	N/A	N/A	N/A	N/A
Overlook Parkway	Washington Street	Alton Way	40	21,362	N/A	N/A	150	433
Overlook Parkway	Alton Way	Hawarden Drive	40	21,447	N/A	N/A	150	435
Overlook Parkway	Hawarden Drive	Ocotillo Drive	40	19,461	N/A	N/A	136	401
Overlook Parkway	Ocotillo Drive	Orozco Drive	40	19,461	N/A	N/A	136	401
Overlook Parkway	Orozco Drive	Golden Star Avenue	40	21,762	N/A	N/A	153	440
Overlook Parkway	Golden Star Avenue	Wyndham Hill Drive	40	21,255	N/A	N/A	149	432
Overlook Parkway	Wyndham Hill Drive	Bodewin Court	40	20,843	N/A	N/A	146	424
Overlook Parkway	Bodewin Court	Chateau Ridge Lane	40	20,768	N/A	N/A	146	423
Overlook Parkway	Chateau Ridge Lane	Kingdom Drive	40	20,809	N/A	N/A	146	424
Overlook Parkway	Kingdom Drive	Miracle Mile	40	21,113	N/A	N/A	148	429
Overlook Parkway	Miracle Mile	Crystal View Terrace	40	21,134	N/A	N/A	148	429
Overlook Parkway	Crystal View Terrace	Existing Western Dead End	40	19,437	N/A	N/A	136	400
Overlook Parkway	Existing Western Dead End	Via Vista Drive	40	19,437	N/A	N/A	136	400
Overlook Parkway	Via Vista Drive	Existing Eastern Dead End	25	19,513	N/A	N/A	136	402
Overlook Parkway	Existing Eastern Dead End	Sandtrack Road	40	19,513	N/A	N/A	136	402
Overlook Parkway	Sandtrack Road	Alessandro Boulevard	40	21,025	N/A	N/A	147	428
Engel Drive	Washington Street	Existing Engel Drive	25	20,756	N/A	N/A	N/A	137
Engel Drive	Lenox Avenue	Washington Street	25	1,153	N/A	N/A	N/A	N/A
Madison Street	Cleveland Avenue	Washington Street	30	525	N/A	N/A	N/A	N/A
Madison Street	Washington Street	Victoria Avenue	30	32,380	N/A	N/A	102	318
Washington Street	Overlook Parkway	Engel Drive	40	51,664	N/A	113	345	854
Washington Street	Engel Drive	Madison Street	35	32,001	N/A	N/A	154	445

Impage Source: City of Riverside, 2009



Scenario 3 Noise Contours

- 55 CNEL
- 60 CNEL
- 65 CNEL

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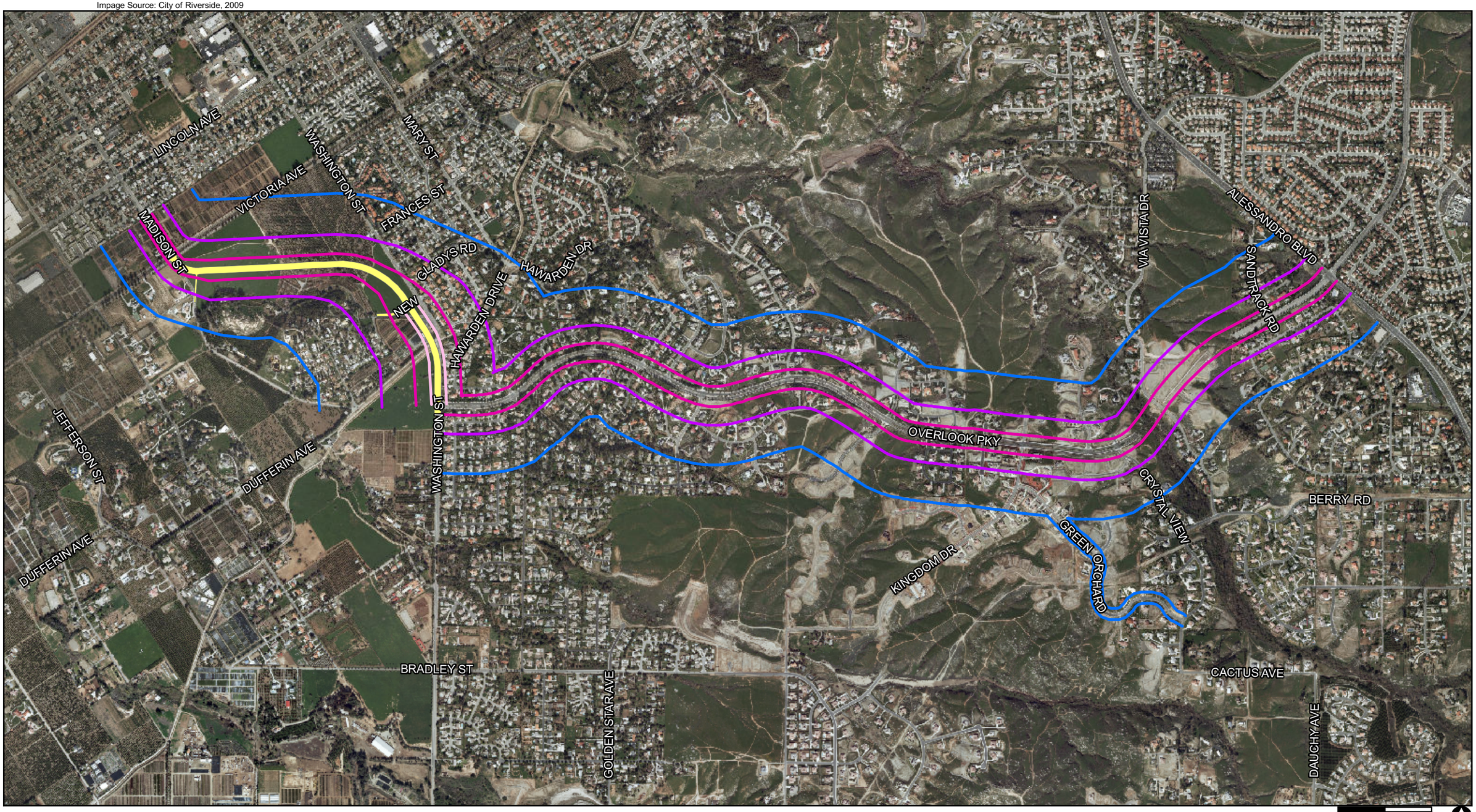
FIGURE 3.10-2

Scenario 3 Future Traffic Noise Contours

Impage Source: City of Riverside, 2009



Proposed Road Relocation

Scenario 4 Noise Contours

55 CNEL

60 CNEL

65 CNEL

70 CNEL

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FIGURE 3.10-3

Scenario 4 Future Traffic Noise Contours

Noise levels would also exceed 65 CNEL at residences located within 113 feet of the centerline of the Proposed C Street between Overlook Parkway and Gladys Road. There are existing walls located adjacent to this roadway segment as well. However, as discussed above, these walls would reduce noise levels at these residences to 68 CNEL, but not to a level less than significant. Impacts at these residences would be **significant (S4-NOS-3).** The remaining portion of the Proposed C Street west of Washington (between Dufferin Avenue and Victoria Avenue) would be adjacent to agricultural land and would not exceed the City's agricultural compatibility noise level limits.

As also shown, noise levels at residences adjacent to Crystal View Terrace and Green Orchard Place would be **less than significant**.

Off-site

Mitigation measures identified in the TIA such as signalization, restriping, and repaving for additional turn lanes at key intersections are required in previously developed areas. These off-site improvements would not expose persons to or generate noise levels from future traffic noise (new and gated roadways) in excess of standards established in the City's General Plan 2025. **No impacts** are identified.

c. Construction Noise

Scenario 1

Under Scenario 1, both Crystal View Terrace and Green Orchard Place gates would remain in place and be closed until Overlook Parkway is connected across the Alessandro Arroyo to Alessandro Boulevard. No construction would occur under Scenario 1. Therefore, **no impacts** would result.

Scenario 2

Under Scenario 2, the gates on both Crystal View Terrace and Green Orchard Place would be removed, and there would be no connection of Overlook Parkway across the Alessandro Arroyo to Alessandro Boulevard. Like Scenario 1, no construction would occur under Scenario 2, as the removal of the gates does not involve construction equipment. **No impacts** would result.

Scenario 3

Under Scenario 3, the gates on Crystal View Terrace and Green Orchard Place would be removed and Overlook Parkway would be connected across the Alessandro Arroyo to Alessandro Boulevard through construction of a fill crossing and a bridge. In addition, storm drains, water lines, and gas and electric power lines would be extended to tie into existing lines concurrent with roadway construction. Temporary construction activities

would occur within a construction easement on either side of the proposed roadways. Construction staging would be accommodated primarily on Overlook Parkway and other existing roadways.

Noise associated with the earthwork, excavation, construction, and surface preparation for the proposed Project will result in short-term impacts to sensitive uses. A variety of noise-generating equipment would be used during the construction phase of the Project, such as scrapers, dump trucks, backhoes, front-end loaders, jackhammers, and concrete mixers, along with others.

A bridge is proposed to connect Overlook Parkway from Crystal View Terrace to Via Vista Drive and span the Alessandro Arroyo. The bridge construction is anticipated to last approximately nine months. Additionally, grading improvements are required to construct the missing section of roadway between Brittanee Court and Sandtrack Road. This fill crossing construction is anticipated to last approximately two months. Table 3.10-13 summarizes the phases of construction, the equipment required for each task, and the noise level produced by each piece of equipment.

Noise levels for each construction phase were modeled at a series of receivers located at the 37 residences closest to the construction activity. Modeled noise levels assume flat site conditions and do not account for shielding provided by buildings or topography. The modeled receivers, the location of the bridge construction, and the location of the fill crossing construction are shown in Figure 3.10-4. The source noise levels for each construction phase are shown in Table 3.10-13. The sources of construction noise were assumed to be located at the center of the fill-crossing construction area and at the center of the bridge construction area as shown in Figure 3.10-4. The modeled noise levels during each construction phase are shown in Table 3.10-14. As shown, noise levels at the residences closest to the construction activity are projected to range from 46.6 to 68.4 A-weighted average sound level (dB(A) L_{eq}).

As discussed above, if construction creates a noise disturbance at residential properties or exceeds the maximum permitted noise level for the land use category (see Table 3.10-2), then the time of construction activities shall be restricted. As shown in Table 3.10-2, for residential uses, exterior noise levels shall not exceed 45 dB(A) L_{eq} between the hours of 10:00 P.M. and 7:00 A.M. and 55 dB(A) L_{eq} between 7:00 A.M. and 10:00 P.M., and interior noise levels shall not exceed 35 dB(A) L_{eq} between the hours of 10:00 P.M. and 7:00 A.M. and 45 dB(A) L_{eq} between 7:00 A.M. and 10:00 P.M.

TABLE 3.10-13
FILL-CROSSING AND BRIDGE CONSTRUCTION EQUIPMENT AND SOURCE NOISE LEVELS

	Equipment	Number	Maximum 1-Hour Noise Level at 50 Feet [dB(A) $L_{eq(1)}$][1]	Usage Factor[2]	Total Noise Level at 50 Feet [dB(A) $L_{eq(1)}$]
BRIDGE CONSTRUCTION					
Abutment Construction (2 months)	Excavator	1	80.7	40%	76.7
	Backhoe	1	77.6	40%	73.6
	Bobcat	1	60.7	100%	60.7
	Pile Driver	1	79.1	20%	72.1
	Crawler Crane	1	80.6	16%	72.6
	Mobile Crane	1	80.6	16%	72.6
	Concrete Pump	1	81.4	20%	74.4
	Portable Generators	2	80.6	50%	80.6
	Air Compressors	2	77.7	40%	76.7
PHASE TOTAL					**85.0**
Bent Construction (1 month)	Backhoe	1	77.6	40%	73.6
	Bobcat	1	60.7	100%	60.7
	Pile Drill Rig	1	79.1	20%	79.1
	Crawler Crane	1	80.6	16%	72.6
	Mobile Crane	1	80.6	16%	72.6
	Concrete Pump	1	81.4	20%	74.4
	Portable Generators	2	80.6	50%	80.6
	Air Compressors	2	77.7	40%	76.7
PHASE TOTAL					**85.2**
Superstructure Construction (6 months)	Backhoe	1	77.6	40%	73.6
	Forklifts	1	77.6	40%	73.6
	Pile Drill Rig	1	79.1	20%	79.1
	Concrete Pump	1	81.4	20%	74.4
	Portable Generators	2	80.6	50%	80.6
	Air Compressors	2	77.7	40%	76.7
PHASE TOTAL					**85.0**
FILL CROSSING					
Fill Crossing (2 months)	Front End Loader	1	79.1	40%	75.1
	Backhoes	2	77.6	40%	76.6
	Trencher	1	60.7	100%	60.7
	Paving Machine	1	77.2	50%	74.2
	Concrete Truck	1	81.4	20%	74.4
	Compactor	1	83.2	20%	76.2
	Curb and Gutter Machine	1	60.7	100%	60.7
PHASE TOTAL					**82.5**

[1]Source for all equipment except bobcat: FHWA 2006
Source for bobcat: RECON 2008
[2]Usage factor is the amount of time the equipment is operating at full power.

Impage Source: City of Riverside, 2009

Scenario 3 Construction Centers

Scenario 3 Construction Receptors

FIGURE 3.10-4

Scenario 3 Construction Noise Receptors

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TABLE 3.10-14
FILL CROSSING AND BRIDGE CONSTRUCTION NOISE LEVELS AT MODELED RECEIVERS

Receiver	Distance to Bridge Construction (feet)	Distance to Fill Crossing Construction (feet)	Noise Level during Bridge Abutment Construction [dB(A) L_{eq}]	Noise Level during Bridge Bent Construction [dB(A) L_{eq}]	Noise Level during Bridge Superstructure Construction [dB(A) L_{eq}]	Noise Level during Fill Crossing Construction [dB(A) L_{eq}]
1	348	1,499	68.1	68.4	68.2	52.9
2	501	1,666	65.0	65.2	65.0	52.0
3	650	1,792	62.7	62.9	62.7	51.4
4	815	1,862	60.7	61.0	60.8	51.0
5	943	1,937	59.5	59.7	59.5	50.7
6	1,083	2,031	58.3	58.5	58.3	50.3
7	1,210	2,130	57.3	57.5	57.3	49.9
8	876	2,196	60.1	60.3	60.1	49.6
9	1,096	2,525	58.1	58.4	58.2	48.4
10	817	2,351	60.7	60.9	60.7	49.0
11	943	2,519	59.5	59.7	59.5	48.4
12	1,397	2,948	56.0	56.3	56.1	47.1
13	1,638	3,123	54.7	54.9	54.7	46.6
14	683	2,169	62.3	62.5	62.3	49.7
15	1,000	2,385	58.9	59.2	59.0	48.9
16	775	2,112	61.2	61.4	61.2	50.0
17	730	1,942	61.7	61.9	61.7	50.7
18	518	1,757	64.7	64.9	64.7	51.5
19	525	1,430	64.5	64.8	64.6	53.3
20	733	1,299	61.6	61.9	61.7	54.2
21	1,102	1,211	58.1	58.3	58.1	54.8
22	1,443	1,191	55.8	56.0	55.8	54.9
23	1,674	1,260	54.5	54.7	54.5	54.4
24	1,877	1,374	53.5	53.7	53.5	53.7
25	2,396	869	51.4	51.6	51.4	57.7
26	2,257	706	51.9	52.1	51.9	59.5
27	2,189	588	52.1	52.4	52.2	61.1
28	2,266	704	51.8	52.1	51.9	59.5
29	2,124	562	52.4	52.6	52.4	61.5
30	1,985	427	53.0	53.2	53.0	63.8
31	1,797	291	53.9	54.1	53.9	67.2
32	1,599	227	54.9	55.1	54.9	69.3
33	1,421	536	55.9	56.1	55.9	61.9
34	1,463	787	55.6	55.9	55.7	58.5
35	1,446	1,054	55.7	56.0	55.8	56.0
36	1,059	1,287	58.4	58.7	58.5	54.3
37	703	1,336	62.0	62.2	62.1	53.9

As required by Section 7.35.010 of the Riverside Municipal Code (RMC) and as included as a project design feature, construction activities would not occur between the hours of 7:00 P.M. and 7:00 A.M. Monday through Friday, between 5:00 P.M. and 8:00 A.M. on Saturday, or at any time on Sunday or federal holidays except for emergency work or by variance

Exterior noise levels are projected to exceed the nighttime stationary noise source limit of 45 dB(A) L_{eq} at all modeled receivers. However, construction would not occur during the nighttime hours.

As stated in Section 7.25.010 (A)(5) of the RMC, it shall be unlawful for any person to cause or allow the creation of any noise that exceeds “the exterior noise standard for the applicable land use category, plus twenty decibels or the maximum measured ambient noise level, for any period of time”. Exterior noise levels are projected to exceed the daytime stationary noise source limit of 55 dB(A) L_{eq} at Receivers 1–12, 14–22, and 33–37 during bridge construction, and at Receivers 25–35 during fill crossing construction. However, construction noise levels would not exceed 75 dB(A) L_{eq}. Additionally, this analysis assumes that construction equipment would operate consistently throughout the day. In actuality, construction equipment noise would be intermittent and there would be worker breaks throughout the day. The noise levels shown in Table 3.10-14 are therefore conservative estimates. Therefore, because construction activities would be limited to the times discussed above, would not exceed 75 dB(A) L_{eq}, and would not occur at nighttime, on Sundays, or on federal holidays, construction noise impacts would be **less than significant**.

Scenario 4

Under Scenario 4, both Crystal View Terrace and Green Orchard Place gates would be removed and Overlook Parkway would be connected east across Alessandro Arroyo to Alessandro Boulevard. In addition, Overlook Parkway also would be extended west of Washington Street to provide a connection to SR-91.

Noise impacts due to the construction of the bridge and fill crossing would be the same as those discussed above for Scenario 3. Construction of the Proposed C Street west of Washington Street would include grading and paving. It is anticipated that these construction activities would last up to 90 days, as shown in Table 3.10-15. Table 3.10-15 also shows the typical noise levels of equipment that could be used for roadway construction. However, unlike Scenario 3 whose construction equipment would be centered on two general locations (at the bridge and fill crossing), Scenario 4 involves the construction of a new roadway, and construction is linear in nature. Equipment that would be used for the construction of the new roadway would constantly be moving along the length of the alignment and would not be located at one position for a long period of time. The typical noise level at 50 feet from a linear construction path is 72 dB(A) L_{eq}. This assumes three pieces of equipment in use at one time.

TABLE 3.10-15
PARKWAY CONSTRUCTION EQUIPMENT AND SOURCE NOISE LEVELS

	Equipment	Number	Maximum 1-Hour Noise Level at 50 Feet [dB(A) $L_{eq(1)}$][1]	Usage Factor[2]	Total Noise Level at 50 Feet [dB(A) $L_{eq(1)}$]
GRADING (3 months)					
	Excavators	2	83.7	40%	79.7
	Grader	1	85.0	40%	81.0
	Rubber Tired Dozer	1	71.7	40%	67.7
	Scrapers	2	86.6	40%	82.6
	Tractors/Loaders/Backhoes	2	80.6	40%	76.6
PHASE TOTAL					**86.6**
PAVING (1.5 months)					
	Paver	1	77.2	50%	74.2
	Paving Equipment	1	77.2	50%	74.2
	Roller	1	80.0	20%	73.0
PHASE TOTAL					**78.6**

[1]Source: FHWA 2006
[2]Usage factor is the amount of time the equipment is operating at full power.

As required by Section 7.35.010 of the RMC and as included as a project design feature, construction activities would not occur between the hours of 7:00 P.M. and 7:00 A.M. Monday through Friday, between 5:00 P.M. and 8:00 A.M. on Saturday, or at any time on Sunday or federal holidays except for emergency work or by variance.

Noise levels for construction of the Proposed C Street alignment were modeled at a series of 24 receivers located at residences closest to the proposed alignment. Modeled noise levels assume flat site conditions and do not account for shielding provided by buildings or topography. The modeled receivers and the proposed alignment are shown in Figure 3.10-5. As discussed above, the source noise level for linear roadway construction is 72 dB(A) L_{eq}. The modeled noise levels at the receivers are shown in Table 3.10-16. As shown, noise levels at the residences closest to the construction activity are projected to range from 40.3 to 69.6 dB(A) L_{eq}.

TABLE 3.10-16
PARKWAY CONSTRUCTION NOISE LEVELS AT MODELED RECEIVERS

Receiver	Distance to Nearest Point of Parkway Alignment (feet)	Modeled Noise Level at Receiver [dB(A) L_{eq}]
1	538	51.4
2	539	51.4
3	389	54.2
4	535	51.4
5	463	52.7
6	327	55.7
7	138	63.2
8	101	65.9
9	66	69.6
10	645	49.8
11	1,277	43.9
12	1,814	40.8
13	1,913	40.3
14	1,314	43.6
15	787	48.1
16	375	54.5
17	225	58.9
18	202	59.9
19	90	66.9
20	155	62.2
21	739	48.6
22	944	46.5
23	1,361	43.3
24	1,004	45.9

Impage Source: City of Riverside, 2009

Scenario 4 Construction Area

Scenario 4 Construction Receptors

FIGURE 3.10-5

Scenario 4 Construction Noise Receptors

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Exterior noise levels are projected to exceed nighttime stationary noise limit of 45 dB(A) L_{eq} at some of modeled receivers (Receivers 1 through 10, 15 through 22, and 24). However, construction would not occur during the nighttime hours.

Exterior noise levels are projected to exceed the daytime stationary noise source limit of 55 dB(A) L_{eq} at Receivers 6–9 and 17–20. However, construction noise levels would not exceed 75 dB(A) L_{eq}. Therefore, because construction activities would be limited to the times discussed above, would not exceed 75 dB(A) L_{eq}, and would not occur at nighttime, on Sundays, or on federal holidays, construction noise impacts would be **less than significant**.

Off-site

The previously mentioned off-site improvements of signalization, restriping, and repaving for additional turn lanes at key intersections would require the use of minimal construction equipment, and would not expose persons to or generate noise levels from construction related activities in excess of standards established in the City's General Plan 2025. These activities could last from ½ day up to several weeks. Construction activities would comply with the RMC. As stated in Section 7.35.010(B)(5) of the RMC, construction activities would be prohibited between the hours of 7:00 P.M. and 7:00 A.M. on weekdays, 5:00 P.M. and 8:00 A.M. on Saturdays, and on Sundays or federal holidays. **No impacts** are identified.

3.10.4.2 Significance of Impacts

a. Future Traffic Noise – Existing Roadways

Gates Closed Baseline Comparison

Scenario 1 is equivalent to the Gates Closed baseline. Therefore, there is no difference in traffic volumes or noise levels between Scenario 1 and the Gates Closed baseline. Traffic noise impacts would be less than significant.

Under Scenario 2, noise levels at 50 feet from the centerline of Overlook Parkway between Orozco Drive and Golden Star Avenue would exceed 65 CNEL. However, there are existing walls located adjacent to this segment that would reduce noise levels to 65 CNEL or less. Therefore, traffic noise impacts would be less than significant.

Under Scenario 3, noise levels at 50 feet from the centerline of Madison Avenue between Victoria Avenue and Lincoln Avenue, Overlook Parkway between Washington Street and Alessandro Boulevard, and Washington Street between Overlook Parkway and Engel Drive would exceed 65 CNEL. There are existing walls located adjacent to these segments of Overlook Parkway and Washington Street. Traffic noise impacts adjacent to Overlook Parkway would be less than significant. However, Scenario 3

would result in a direct significant impact to sensitive receivers located along Washington Street and Madison Street (**S3-NOS-1**).

Under Scenario 4, noise levels at 50 feet from the centerline of Madison Avenue between Washington Street and Railroad Avenue, Overlook Parkway between Washington Street and Alessandro Boulevard, Victoria Avenue between Adams Street and Madison Street, and Washington Street between Overlook Parkway and Engel Drive would exceed 65 CNEL. There are existing walls located adjacent to these segments of Overlook Parkway, Victoria Avenue, and Washington Street. Traffic noise impacts adjacent to Overlook Parkway and Victoria Avenue would be less than significant. However, Scenario 4 would result in a direct significant impact to sensitive receivers located along Washington Street and Madison Street (**S4-NOS-1**).

No impacts associated with off-site improvements would occur.

Gates Open Baseline Comparison

Under Scenario 1, noise levels at 50 feet from the centerline of the roadways would be less than the 65 CNEL standard at all potentially impacted roadway segments. Impacts due to Scenario 1 would be less than significant.

Scenario 2 is equivalent to the Gates Open baseline. Therefore, there is no difference in traffic volumes or noise levels between Scenario 2 and the Gates Open baseline. Traffic noise impacts would be less than significant.

Under Scenario 3, noise levels at 50 feet from the centerline of Overlook Parkway between Washington Street and Alessandro Boulevard would exceed 65 CNEL. Existing walls located adjacent to these segments of Overlook Parkway would reduce noise levels below 65 CNEL. Traffic noise impacts adjacent to Overlook Parkway would be less than significant.

Scenario 4 would result in the same impacts identified above under Gates Closed Baseline Comparison. Traffic noise impacts adjacent to Overlook Parkway and Victoria Avenue would be less than significant. However, Scenario 4 would result in a direct, significant impact to sensitive receivers located along Washington Street and Madison Street (**S4-NOS-2**).

No impacts would occur from implementation of off-site improvements.

b. Future Traffic Noise – New and Gated Roadways

No new roadways would be constructed under Scenario 1. The gates on Crystal View Parkway and Green Orchard Place would remain in place and closed, preventing pass-through traffic. Impacts would be less than significant.

Under Scenario 2, future noise levels would be less than the City residential noise compatibility criteria of 65 CNEL at residences located adjacent to the portions of Crystal View Terrace, Green Orchard Place, and Overlook Parkway that would experience new pass-through traffic after the removal of the gates. Impacts would be less than significant.

Under Scenario 3, future noise levels would exceed the City residential noise compatibility criteria of 65 CNEL at all residences located adjacent to Overlook Parkway between Alessandro Boulevard and Washington Street. However, as discussed above, existing walls have already been constructed in these locations. Impacts at these residences would be less than significant. There are no residences located within the 65 CNEL contour line in the area immediately adjacent to the proposed fill-crossing and bridge. Noise impacts adjacent to these new roadway segments would be less than significant. Noise levels at residences adjacent to Crystal View Terrace and Green Orchard Place would also be less than significant.

Under Scenario 4, future noise levels would exceed the City residential noise compatibility criteria of 65 CNEL at all residences located adjacent to Overlook Parkway between Alessandro Boulevard and Washington Street. However, as discussed above, existing walls have already been constructed in these locations. Impacts at these residences would be less than significant. Additionally, noise levels would exceed 65 CNEL at the residences located west of Washington Street between Overlook Parkway and Gladys Road. However, as discussed above, these walls would reduce noise levels, but not to a level less than significant. Impacts at these residences would be significant (**S4-NOS-3**).

There are no residences located within the 65 CNEL contour line in the area immediately adjacent to the proposed fill-crossing and bridge. Noise impacts adjacent to these new roadway segments would be less than significant.

The remaining portion of the Proposed C Street (between Dufferin Avenue and Victoria Avenue) would be adjacent to agricultural land and would not exceed the City of Riverside agricultural compatibility noise level limits and noise impacts would be less than significant. As also shown, noise levels at residences adjacent to Crystal View Terrace and Green Orchard Place would be less than significant.

No impacts associated with off-site improvements would occur.

c. Construction Noise

No construction would occur under Scenarios 1 and 2, and construction noise impacts would be less than significant.

Under Scenarios 3 and 4, because construction activities would be limited to the times discussed above, would not exceed 75 dB(A) L_{eq}, and would not occur at nighttime, on Sundays, or on federal holidays, construction noise impacts would be less than significant.

No impacts would occur from implementation of off-site improvements.

3.10.4.3 Mitigation, Monitoring, and Reporting

a. Future Traffic Noise – Existing Roadways

Because the significant noise impacts are to existing homes in an already urbanized area, there is no feasible mitigation. Impacts for both the Gates Closed and Gates Open condition under Scenarios 3 and 4 would remain significant and unavoidable.

b. Future Traffic Noise – New and Gated Roadways

As discussed above, mitigation is infeasible and this impact under Scenario 4 would remain significant and unavoidable.

3.10.4.4 Significance after Mitigation

a. Traffic Noise – Existing Roadways

Impacts due to Scenarios 3 and 4 would remain significant and unavoidable.

b. Traffic Noise – New and Gated Roadways

Impacts due to Scenario 4 would remain significant and unavoidable.

3.10.5 Issue 2: Permanent Ambient Noise Increase

Would the proposed project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

3.10.5.1 Impact Analysis

The proposed Project would not create any new permanent stationary sources that would increase the ambient noise environment. However, a permanent increase in ambient noise levels would result from the change in traffic patterns on roadways in the Project vicinity. These traffic noise impacts are discussed above in Section 3.10.4.1. As detailed above, noise levels under Scenarios 1 and 2 would be less than the residential standard at all affected roadway segments. Therefore, impacts from Scenario 1 and Scenario 2 would be **less than significant**. However, Scenarios 3 and 4 would result in

significant traffic noise impacts at existing residences located adjacent to Madison Street. This permanent increase in ambient noise would be **significant** (see **S3-NOS-1, S4-NOS-1, S4-NOS-2, and S4-NOS-3**).

Off-site

The off-site improvements involve short-term construction in accordance with the RMC and would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project. **No impacts** are identified.

3.10.5.2 Significance of Impacts

Impacts from Scenarios 1 and 2 would be less than significant. Scenarios 3 and 4 would result in significant traffic noise impacts at existing residences located adjacent to Washington Street and Madison Street (**S3-NOS-1, S4-NOS-1, S4-NOS-2, and S4-NOS-3**). This permanent increase in ambient noise would be significant.

No impacts from off-site improvements would occur.

3.10.5.3 Mitigation, Monitoring, and Reporting

Because the significant noise impacts are to existing homes in an already urbanized area, there is no feasible mitigation. Impacts under Scenario 3 would remain significant and unavoidable.

3.10.5.4 Significance after Mitigation

Impacts due to Scenarios 3 and 4 would remain **significant and unavoidable**.

3.10.6 Issue 3: Temporary Ambient Noise Increase

Would the proposed project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

3.10.6.1 Impact Analysis

As detailed above, Scenarios 1 and 2 would not require construction, and therefore, **no impact** would result. A temporary increase in ambient noise would result from Project construction under Scenarios 3 and 4. Construction noise under each of the proposed scenarios is discussed in Section 3.10.4.1 above. Because construction activities would be limited to the times discussed above, would not exceed 75 dB(A) L_{eq}, and would not occur at nighttime, on Sundays, or on federal holidays, construction noise impacts would be **less than significant**.

Off-site

Construction of the off-site improvements would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project. However, because of the short duration of these off-site improvements, impacts are considered **less than significant**.

3.10.6.2 Significance of Impacts

Impacts would be less than significant.

Impacts from off-site improvements would be less than significant.

3.10.6.3 Mitigation, Monitoring, and Reporting

No mitigation would be required.

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