4.10 NOISE

4.10.1 Setting

a. Overview of Sound Measurement. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. Noise is typically defined as unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. Prolonged exposure to high levels of noise is known to have several adverse effects on people, including hearing loss, communication interference, sleep interference, physiological responses, and annoyance. The noise environment typically includes background noise generated from both near and distant noise sources as well as the sound from individual local sources. These can vary from an occasional aircraft or train passing by to continuous noise from sources such as traffic on a major road.

The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). In addition to the instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound pressure level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, Leq is summed over a one-hour period.

The sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Decibels are summed on a logarithmic basis. Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB and a sound that is 10 dB less than the ambient sound level would result in a negligible increase (less than 0.5 dB) in total ambient sound levels. In terms of human response to noise, studies have indicated that a noise level increase of 3 dBA is barely perceptible to most people, a 5 dBA increase is readily noticeable, and a difference of 10 dBA would be perceived as a doubling of loudness. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while those along arterial streets are in the 50 to 60+ dBA range. Normal conversational levels are in the 60-65 dBA range and ambient noise levels greater than that can interrupt conversations.

Noise levels from stationary or point sources (such as construction equipment and industrial machinery) typically attenuate at a rate of 6 to 7.5 dB per doubling of distance over acoustically hard and soft locations, respectively. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dB per doubling of distance, while noise from heavily traveled roads typically attenuates at about 3 dB per doubling of distance. Noise levels are also reduced by intervening structures, such as building or, walls (typically referred to as "transmission loss"). Generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or earthen berm that breaks the line-of-sight reduces noise

levels by 5 to 10 dBA. The Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment* (2006) indicates that the manner in which newer buildings in California are constructed generally provides a reduction of exterior-to interior noise levels of about 25 dBA with closed windows (2006). Standard construction materials and techniques used for residential developments in Southern California (conventional wood frame construction consistent with current California energy conservation requirements) normally result in a minimum exterior-to-interior noise attenuation of 15 dBA with windows open and 20 dBA with windows closed.

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. To evaluate community noise on a 24-hour basis, the day-night average sound level was developed (Ldn). Ldn is the average of all A-weighted levels for a 24-hour period with a 10 dB upward adjustment added to those noise levels occurring between 10:00 PM and 7:00 AM to account for the general increased sensitivity of people to nighttime noise levels. The Community Noise Equivalent Level (CNEL) is identical to the Ldn with one exception. The CNEL adds 5 dB to evening noise levels (7:00 PM to 10:00 PM). Thus, both the Ldn and CNEL noise measures represent a 24-hour average of A-weighted noise levels with Ldn providing a nighttime adjustment and CNEL providing both an evening and nighttime adjustment.

b. Groundborne Vibration. Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) (FTA 2006).

The background vibration velocity level in residential areas is typically around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest for groundborne vibration is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings (FTA 2006). The general human response to different levels of groundborne vibration velocity levels is described in Table 4.10-1.

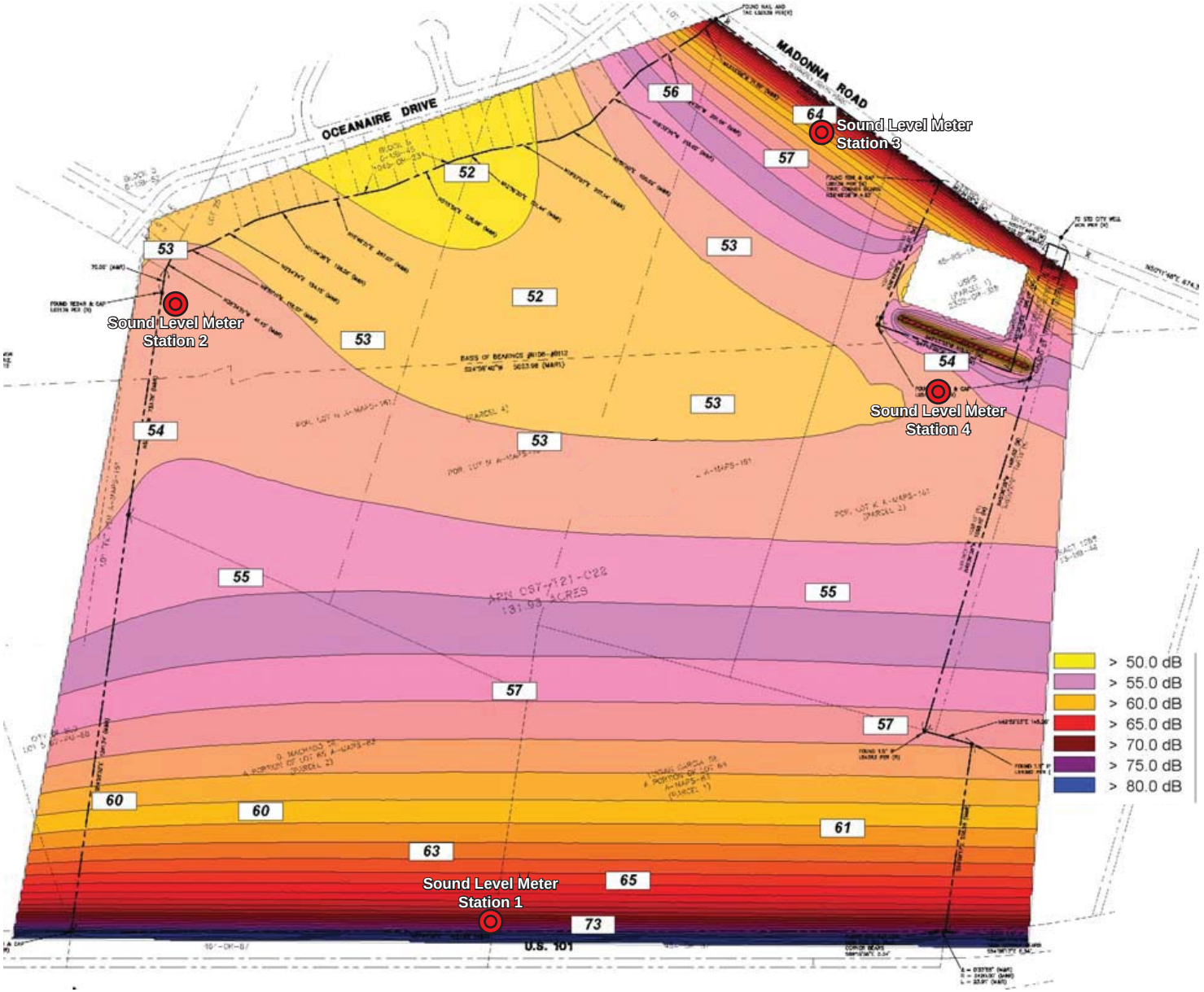
Table 4.10-1
Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
90 VdB	Difficulty with tasks such as reading computer screens.

Source: FTA 2006.

c. Existing Noise Environment. The project site is located west of U.S. Highway 101 (U.S. 101) and east of Madonna Road, with residential uses to the west, commercial uses to the north, and agricultural uses to the south. The project site is in an area characterized primarily by residential and commercial development, and is within the San Luis Obispo County Regional Airport Land Use Plan (ALUP) noise contours. Consequently, noise sources on the project site and in the site vicinity include vehicular traffic, as well as air traffic from San Luis Obispo County Regional Airport. In addition there are potential stationary noise sources from neighboring commercial activities and from the U.S. Post Office on Dalidio Drive. The project site is bordered by U.S. 101 to the east and by Madonna Road to the north. Commercial activities, including loading docks and car dealerships, are located southwest of the site across Prefumo Creek.

45dB.com prepared a *Sound Level Assessment* for the project site in February 2015 (refer to Appendix K). As part of the analysis, existing sound levels on the project site were measured over a 24-hour period beginning on January 16, 2015 through January 17, 2015. Four sound level measurement stations were selected to represent the various potential noise sources found on this site. Table 4.10-2 describes the sound level measurement locations and results. Figure 4.10-1 depicts the sound level measurement locations and existing sound level contours on the project site, taking into account all existing sources of noise, including noise from nearby roadways and aircraft noise.



Existing Sound Level Contours on the Project Site

Figure 4.10-1

Sound Level Assessment prepared by 45dB.com, February 26, 2015

Table 4.10-2
Noise Measurement Results

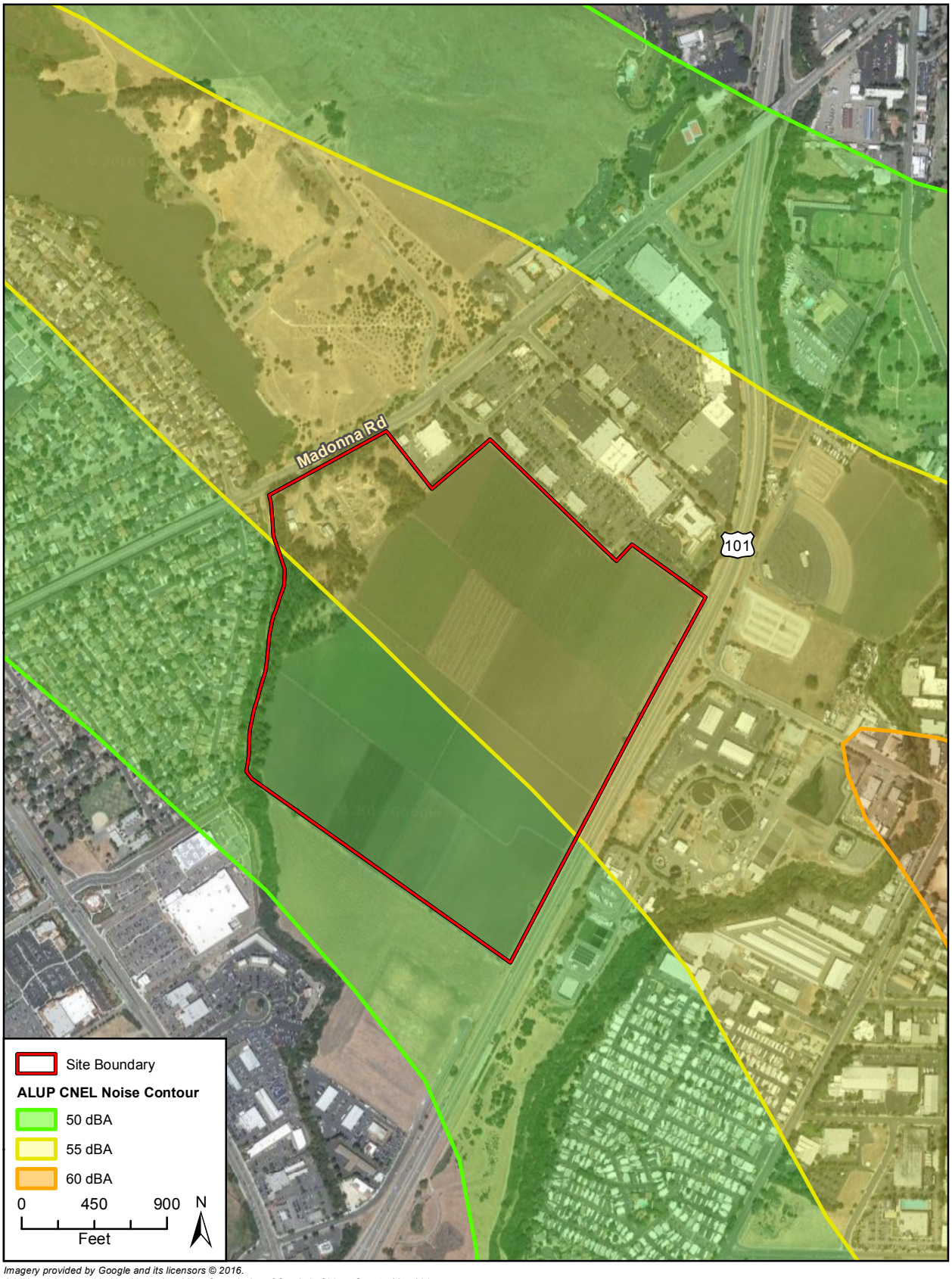
Station	Location	Primary Noise Source	Measured Sound Level	
			Hourly Leq range [1]	Ldn/CNEL [2]
1	Located at the southeastern site boundary and 75 feet from the nearest traffic lane of U.S. 101	Vehicle traffic along U.S. 101	61-73 dBA	74 dBA
2	Located in the southwest corner of the site	Aircraft departing and approaching San Luis Obispo County Regional Airport, as well as commercial operations to the west.	39-54 dBA	53 dBA
3	Located near the north boundary of the property and 120 feet from the nearest traffic lane (eastbound) of Madonna Road	Vehicle traffic along Madonna Road	49-67 dBA	64 dBA
4	Located next to the north boundary of the property, adjacent to the U.S. Postal Service Facility loading and staging area	Delivery, loading and unloading of mail from the facility (which may occur at all hours)	40-54 dBA	54 dBA

Notes: 24-hour measurements were taken using an ANSI Type 1 integrating sound level meter.
1. Leq is the average sound level over each 1-hour period of the overall 24-hour measurement period.
2. Ldn/CNEL is the weighted average sound level over a 24-hour period
Source: 45dB.com, February 2015.

In addition to these 24-hour continuous sound level measurements, sound levels were spot checked around the perimeter of the site. The hourly Leq for each of the measurement sites was derived from measured sound level data. In addition, for each measurement location the 24-hour Ldn and CNEL values were calculated. The resulting sound level contours are shown in Figure 4.10-1. Complete data from each 24-hour sound level measurement station is included in Appendix K.

d. Land Use Compatibility. The northern and northeastern portions of the project site are bordered by existing commercial uses and the U.S. Post Office on Dalidio Drive, neither of which are considered noise-sensitive land uses. These uses obtain vehicular access off of Madonna Road and Dalidio Drive, and noise from vehicle movement to and from these businesses is audible on the northern and eastern portions of the Specific Plan Area. The western portion of the Specific Plan Area is bordered by Prefumo Creek, with residences on the opposite side of the Creek. The southwestern portion of the Specific Plan Area is bordered by agricultural uses, and the southeastern portion of the Specific Plan Area is bordered by U.S. 101.

The San Luis Obispo County Regional Airport is located approximately 1.6 miles southeast from the Specific Plan Area. The ALUP includes noise contours that indicate noise levels created by incoming and departing aircraft from the airport. Figure 4.10-2 shows the ALUP noise contours on and in the vicinity of the project site. The eastern portion of the site is within the 55 dBA CNEL airport noise contour, and the western portion of the site is within the 50 dBA CNEL



Imagery provided by Google and its licensors © 2016.
Additional data provided by Airport Land Use Commission of San Luis Obispo County, May 2015.

Airport Land Use Plan
Airport Noise Contours on the Project Site

Figure 4.10-2

airport noise contour. The City of San Luis Obispo General Plan Noise Element depicts the airport's noise contours from 60 dBA CNEL to 75 dBA CNEL (refer to Figure 6 of the Noise Element); however, as the Noise Element does not depict noise contours below 60 dBA CNEL, none of these contours overlay the Specific Plan Area (City of San Luis Obispo 1996). Figure 4.10-1 shows existing sound level contours on the site, taking into account all existing sources of noise, including noise from nearby roadways and aircraft noise.

e. Sensitive Noise Receptors. Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Single- and multi-family residences, schools, libraries, medical facilities, retirement/assisted living homes, health care facilities, and places of worship are most sensitive to noise intrusion and therefore have more stringent noise exposure targets than commercial or agricultural uses that are not subject to impacts such as sleep disturbance, disruption of conversations, lectures or sermons, or decreased attractiveness of exterior use areas, such as patios, backyards, or parks. Of particular concern is exposure of sensitive receptors to long-term elevated interior noise levels and sleep disturbance, which can be associated with health concerns.

Noise sensitive land uses near the project site include the residential areas located approximately 75 feet to the southwest and west from the project site boundary, as well as Laguna Lake Park located approximately 110 feet to the north of the project site. The nearest residential areas are separated from the project site by Prefumo Creek and its associated riparian vegetation. Madonna Road separates Laguna Lake Park from the project site.

f. Regulatory Setting.

Federal.

Federal Transit Administration Criteria. The FTA developed methodology and significance criteria to evaluate vibration impacts from surface transportation modes (i.e., passenger cars, trucks, buses, and rail) in the Transit Noise Impact and Vibration Assessment (FTA 2006). For residential buildings (Category 2), the threshold applicable to these projects is 80 VdB.

Federal Noise Control Act (1972). Public Law 92-574 regulates noise emissions from operation of all construction equipment and facilities; establishes noise emission standards for construction equipment and other categories of equipment; and provides standards for the testing, inspection, and monitoring of such equipment. This Act gives states and municipalities primary responsibility for noise control.

State.

State of California's Guidelines for the Preparation and Content of Noise Element of the General Plan (1987). These guidelines reference land use compatibility standards for community noise environments as developed by the California Department of Health Services, Office of Noise Control. Sound levels up to 65 Ldn or CNEL are determined in these guidelines to be normally acceptable for multi-family residential land uses. Sound levels up to 70 CNEL are normally acceptable for buildings containing professional offices or defined as business commercial. The guidelines recommend that a detailed analysis of noise reduction requirements be prepared when new residential development is proposed in areas where existing sound levels approach 70 CNEL.

The California Administrative Code (CAC), Title 24, Noise Insulation Standards. These standards regulate interior noise levels for all new multi-family residences to 45 Ldn or below. If exterior sound levels exceed 60 Ldn, CAC Title 24 requires the preparation of an acoustical analysis showing that the proposed design would limit the sound level to, or below the 45 Ldn requirement.

Local.

City of San Luis Obispo General Plan Noise Element and Noise Guidebook (1996). According to State law, a noise element is a required component of all city and county general plans. The City of San Luis Obispo General Plan Noise Element uses modified land use compatibility standards recommended by the California Department of Health Services. The City's maximum noise exposure standards for noise-sensitive land uses (specific to transportation noise sources) are shown in Table 4.10-3.

Table 4.10-3
Maximum Noise Exposure for Noise-Sensitive Land Use Areas Due To Transportation Noise Sources

	Outdoor Activity Areas [1]	Interior Spaces	
Land Use	**Ldn [2] or CNEL**	**Ldn [2] or CNEL**	**Leq [3]**
Residences, hotels, motels, hospitals, nursing homes	60	45	--
Theaters, auditoriums, music halls	--	--	35
Churches, meeting halls, office building, mortuaries	60	--	45
Schools, libraries, museums	--	--	45
Neighborhood parks	65	--	--
Playgrounds	70	--	--

1. If the location of outdoor activity areas is not shown, the outdoor noise standard shall apply at the property line of the receiving land use.
2. Ldn (day-night average sound level) is the energy-averaged sound level measured over a 24-hour period, with a 10-dB penalty assigned to noise events occurring between 10:00 PM and 7:00 AM and a 5-dB penalty assigned to noise events occurring between 7:00 PM and 10 PM.
3. Leq (equivalent sound level) is the constant or single sound level containing the same total energy as a time-varying sound, over a certain time. If the location of outdoor activity areas is not shown, the outdoor noise standard shall apply at the property line of the receiving land use.
Source: City of San Luis Obispo General Plan, Noise Element 1996.

The City requires that noise generated by new stationary sources be mitigated so as not to exceed the exposure standards shown in Table 4.10-3 for noise-sensitive uses, as measured at the property line of the receiver. The City's Noise Element lists mitigation strategies in a descending order of preference. If preferred strategies are not implemented, it is the responsibility of the project applicant to demonstrate through a detailed noise study that the preferred approaches are either not effective or not practical, before considering other design criteria described in the General Plan. The City considers the following mitigation measures appropriate where existing sound levels significantly impact noise-sensitive land uses, or where cumulative increases in sound levels resulting from new development significantly impact existing noise-sensitive land uses:

1. *Rerouting traffic onto streets that can maintain desired levels of service, consistent with the Circulation Element, and which do not adjoin noise-sensitive land uses.*
2. *Rerouting trucks onto streets that do not adjoin noise-sensitive land uses.*
3. *Constructing noise barriers.*
4. *Reducing traffic speeds through street or intersection design methods.*
5. *Retrofitting buildings with noise-reducing features.*
6. *Establishing financial programs, such as low-cost loans to owners of a noise-impacted property, or developer fees to fund noise-mitigation or trip-reduction programs.*

The City's maximum noise exposure standards for noise-sensitive land uses (specific to stationary noise sources) are shown in Table 4.10-4.

Table 4.10-4
City Maximum Noise Exposure for Noise-Sensitive Land Use Areas Due to Stationary Noise Sources

	Daytime (7:00 AM to 10:00 PM)	Nighttime (10:00 PM to 7:00 AM)
Hourly Leq in dB [1, 2]	50	45
Maximum level in dB [1, 2]	70	65
Maximum impulsive noise in dB [1, 3]	65	60

1. As determined at the property line of the receiver. When determining effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property-line noise mitigation measures.
2. Sound level measurements shall be made with slow meter response.
3. Sound level measurements shall be made with fast meter response.
Source: City of San Luis Obispo General Plan Noise Element, 1996.

The following Noise Element policies are applicable to the project and the local noise environment:

> ***Policy 1.4. New Transportation Noise Sources****. Noise created by new transportation noise sources, including road, railroad, and airport expansion projects, shall be mitigated to not exceed the levels specified in Table 4.10-3 for outdoor activity areas and indoor spaces of noise-sensitive land uses which were established before the new transportation noise source.*
>
> ***Policy 1.6. New Development and Stationary Noise Sources****. New development of noise-sensitive land uses may be permitted only where location or design allow the development to meet the standards of Table 4.10-4, for existing stationary noise sources.*

City of San Luis Obispo Municipal Code, Title 9, Chapter 9.12 (Noise Control). The City's Municipal Code (§9.12.060) specifies noise standards for various categories of land use. These limits, shown in Table 4.10-5, would apply to long-term operation of the site, and are not applicable during construction. As shown in Table 4.10-6, these noise level standards are not to be exceeded more than 30 minutes in any one hour and noise levels are prohibited from exceeding the noise level standard plus 20 dBA for any period of time.

Table 4.10-5
Exterior Noise Limits

Zoning Designation	Time Period	Maximum Acceptable Noise Level (dBA [2])
Low- and Medium-Density Residential (R-1 and R-2); Conservation/Open Space (C/OS)	10:00 PM – 7:00 AM	50
	7:00 AM – 10:00 PM	55
Medium- and High-Density Residential (R-3 and R-4)	10:00 PM – 7:00 AM	50
	7:00 AM – 10:00 PM	55
Office and Public Facility (O and PF)	10:00 PM – 7:00 AM	55
	7:00 AM – 10:00 PM	60
Neighborhood, Retail, Community, Downtown and Tourist Commercial (C-N, C-R, C-C, C-D, C T)	10:00 PM – 7:00 AM	60
	7:00 AM – 10:00 PM	65
Service Commercial (C-S)	Any Time	70
Manufacturing (M)	Any Time	75

Source: City of San Luis Obispo Municipal Code Section 9.12.060

Table 4.10-6
Maximum Time Periods for Increased Noise Levels

Noise Standard for Existing Land Use	Maximum Time Period Allowed
+0 dBA	30 minutes/hour
+5 dBA	15 minutes/hour
+10 dBA	5 minutes/hour
+15 dBA	1 minute/hour
+20 dBA	Any time

Source: City of San Luis Obispo Municipal Code Section 9.12.060

Table 4.10-7 and Table 4.10-8 show the City's maximum allowable noise levels for short-term operation of mobile equipment and long-term operation of stationary equipment at residential properties. Where technically and economically feasible, the City requires that construction activities that use mobile or stationary equipment which may result in noise at residential properties be conducted so that maximum sound levels from mobile equipment at affected

properties would not exceed 75 dBA for single-family residential, 80 dBA for multi-family residential, and 85 dBA for mixed residential/commercial land uses (Municipal Code 9.12.050). Except for emergency repair of public service utilities, or where an exception is issued by the City Community Development Department, the City prohibits operation of tools or equipment used in construction, drilling, repair, alteration, or demolition work daily between the hours of 7:00 PM and 7:00 AM, or any time on Sundays or holidays, such that the sound creates a noise disturbance across a residential or commercial property line.

Table 4.10-7
Maximum Noise Levels for Nonscheduled, Intermittent, Short-Term Operation (Less than 10 Days) of Mobile Equipment at Residential Properties

Zoning Category	Time Period	Noise Level (dBA)
Single-Family Residential	Daily 7:00 AM to 7:00 PM, except Sundays and legal holidays	75 dBA
Multi-Family Residential		80 dBA
Mixed Residential/Commercial		85 dBA
Single-Family Residential	7:00 PM to 7:00 AM, all day Sunday and legal holidays	50 dBA
Multi-Family Residential		55 dBA
Mixed Residential/Commercial		60 dBA

Source: City of San Luis Obispo Municipal Code, 2008.

Table 4.10-8
Maximum Noise Levels for Repetitively Scheduled, Relatively Long-Term Operation (10 Days or More) of Stationary Equipment at Residential Properties

Zoning Category	Time Period	Noise Level (dBA)
Single-Family Residential	Daily 7:00 AM to 7:00 PM, except Sundays and legal holidays	60 dBA
Multi-Family Residential		65 dBA
Mixed Residential/Commercial		70 dBA
Single-Family Residential	7:00 PM to 7:00 AM, all day Sunday and legal holidays	50 dBA
Multi-Family Residential		55 dBA
Mixed Residential/Commercial		60 dBA

Source: City of San Luis Obispo Municipal Code, 2008.

Airport Land Use Plan for the San Luis Obispo County Regional Airport. The San Luis Obispo County Regional ALUP details restrictions on development within the airport vicinity. As described in the ALUP, residential land uses, restaurants, and public assembly areas, among other items, exist as Extremely Noise Sensitive Land Uses. Applicable ALUP policies describe

the noise conditions that may affect the project site. These conditions are shown below and described in Table 4.10-9.

> ***Policy N-1.*** *Would permit or fail to sufficiently prohibit establishment within the projected 60-dB CNEL contour of any extremely noise-sensitive land use.*
>
> ***Policy N-2.*** *Would permit or fail to sufficiently prohibit any extremely noise-sensitive land use within the projected 55-dB CNEL contour, with the exception of developments which meet the criteria delineated in Section 4.3.2.3 for designation as infill.*
>
> ***Policy N-3.*** *Would permit or fail to sufficiently prohibit any moderately noise-sensitive land use within the projected 55-dB CNEL contour, with the exception of developments which meet the requirements for mitigation of interior noise levels specified in Table 4 and in Section 4.3.3.*
>
> ***Policy N-4.*** *Would permit or fail to sufficiently prohibit, in any location which is within or adjacent to an area of demonstrated noise incompatibility or in an acoustic environment substantially similar to an area of demonstrated noise incompatibility:*
>
> *a. Any new residential or other extremely noise-sensitive development*
>
> ***b.*** *Any new moderately noise-sensitive development, unless adequate, specific, and detailed provisions are set forth to mitigate noise incompatibility between allowable or proposed noise-sensitive uses (including foreseeable outdoor activities) and airport operations.*

Table 4.10-9
Summary of Compatibility of Land Uses with CNEL Contours

Noise Environment	Extremely Noise-Sensitive Land Uses
Inside 60 dB CNEL contour	Prohibited
Between 55 and 60 dB CNEL contours	Allowable only within a Designated Residential Infill Area (with appropriate noise mitigation) or as a Small-Scale Residential Project
Outside 55 CNEL dB contour	Allowed

Source: Airport Land Use Commission, 2014.
Refer to Figure 4.10-2.

4.10.2 Previous Program-Level Environmental Review

The 2014 Land Use and Circulation Elements Update EIR (LUCE Update EIR) analyzed noise impacts for the City of San Luis Obispo related to the adoption of the most recent updates to the Land Use and Circulation Elements. However, the LUCE Update EIR did not include a site-specific analysis of this noise issue for the San Luis Ranch Specific Plan Area. The LUCE Update EIR identified unavoidable and significant short-term construction noise impacts due to construction of development projects. The LUCE Update EIR included overall analyses of the impact of construction of 500 new housing units and up to 350,000 square feet of commercial and office space in the San Luis Ranch Specific Plan Area, but did not address the details of such noise impacts on and around the project site. Such development could generate short-term

construction noise levels through the use of heavy-duty construction equipment that exceed the City's Noise Control Ordinance. The LUCE Update EIR also found that increased traffic volumes, noise from operation of new development, and construction of new noise-sensitive uses within airport noise contours could also create potentially significant impacts. However for these three issues, the LUCE Update EIR concluded that implementation of the updated Land Use and Circulation Element policies, and amendments to existing City policies, would reduce impacts to a less than significant level.

4.10.3 Impact Analysis

a. Methodology and Significance Thresholds.

Construction Noise. Construction noise and groundborne vibration levels were estimated based on projected construction vehicle requirements, distance between sensitive receptors and construction activities, and proposed daytime operational levels. Noise levels from typical construction equipment were estimated using data published in the Federal Highway Administration (FHWA) *Construction Noise Handbook* (U.S. Department of Transportation 2013). Construction noise levels would diminish with distance from the construction site, at a rate of approximately 6 dBA per doubling of distance as equipment is generally stationary or confined to specific areas during construction. It should be noted that construction noise and vibration level estimates do not account for the presence of intervening structures or topography, which would further reduce noise and vibration levels at receptor locations. Therefore, the noise and vibration levels presented herein represent a conservative estimate of actual construction noise.

Vibration Levels Associated with Construction Equipment. Groundborne vibration levels associated with construction activities were estimated based on the 2013 California Department of Transportation's (Caltrans) *Transportation and Construction Vibration Guidance Manual*. Potential vibration levels are identified for onsite and offsite locations that are sensitive to vibration, including nearby residences.

Operational and Traffic Noise. Operational noise associated with the project includes residential and commercial operational activities. The City's Municipal Code (§9.12.060) specifies noise standards for long-term operation of the project site, shown in Table 4.10-5 above. Noise generated from stationary sources on the project site is estimated based on the typical dBA levels generated from urban uses, such as heating, ventilation, and air conditioning (HVAC) equipment, delivery trucks, parking lot noise, and other common uses.

Policy 1.4 of the City's Noise Element sets maximum noise exposure standards for noise-sensitive land use (specific to transportation noise sources), as shown in Table 4.10-3. The future noise levels along local roadways and within the project site were calculated using the FHWA's Traffic Noise Model (TNM v. 2.5). Noise modeling data sheets are included in Appendix K. The estimated roadway noise levels are based on traffic data from the project Traffic Impact Study (refer to Section 4.12, *Transportation/Traffic* and Appendix L) and Caltrans traffic counts (Caltrans 2015b and 2015c). Cumulative Year 2035 conditions correspond to two different configurations for the Prado Road/U.S. 101 improvements: Full Build Prado Road Interchange and Prado Road Overcrossing scenarios (for more detail on these two configurations and the associated traffic scenarios, refer to Section 4.12, *Transportation*). Future traffic volumes on U.S. 101 were estimated using a 1 percent annual growth rate. The traffic noise model was calibrated based on the 24-hour sound level measurement taken at station 3, shown in Table 4.10-2. The

measured and modeled noise levels were found to be within 1 dBA, which is within the acceptable margin-of-error of noise monitoring equipment and modeling programs.

Overall onsite noise levels were calculated by standard logarithmic decibel addition. Based on logarithmic addition, a doubling of sound energy equates to an approximately 3 dBA increase in noise (e.g., an increase from 65 dBA to 68 dBA represents a doubling of sound energy).

Significance Thresholds. The following criteria are based on Appendix G of the *State CEQA Guidelines*. Impacts would be potentially significant if the project would result in:

1. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*
2. *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;*
3. *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*
4. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*
5. *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, exposure of people residing or working in the project area to excessive noise levels; or*
6. *For a project within the vicinity of private airstrip, would the project expose people residing or working the project area to excessive noise levels.*

The Initial Study determined that the project would not result in exposure of persons to excessive noise levels due public or private airport operations. Therefore, Thresholds 5 and 6 are not discussed further in this section. Refer to Section 4.14, *Issues Addressed in the Initial Study*, for a discussion of these impacts.

The maximum sound levels established by Municipal Code 9.12.050 and described in Table 4.10-7 and Table 4.10-8 in Section 4.10.1(f), *Regulatory Setting*, are the applicable construction noise thresholds for the proposed project. Maximum sound levels from mobile equipment at affected properties should not exceed 75 dBA for single-family residential, 80 dBA for multi-family residential, and 85 dBA for mixed residential/commercial land uses, as shown in Table 4.10-7. Maximum sound levels from stationary equipment at affected properties should not exceed 60 dBA for single-family residential, 65 dBA for multi-family residential, and 70 dBA for mixed residential/commercial land uses, as shown in Table 4.10-8.

Caltrans provides thresholds of significance for vibration and methodology for calculating vibration levels at distances from generation. Table 4.10-10 indicates vibration levels at which humans would be affected by vibration levels.

Table 4.10-10
California Department of Transportation Vibration Annoyance Potential Criteria

Human Response Condition	Maximum Vibration Level (in/sec) for Transient Sources	Maximum Vibration Level (in/sec) for Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation 2013.

Traffic noise impacts due to project-generated traffic would be significant if traffic-generated noise associated with development of the project would expose new sensitive receptors to unacceptable noise levels, based on the City's standards for transportation noise sources in Table 4.10-3. For existing noise-sensitive receptors, project-generated traffic noise would be significant if it would result in a permanent increase of 3 dBA in ambient noise levels in the project vicinity above levels existing without the project. (An increase of 3 dBA or greater is typically considered a substantial increase as it is perceivable by the human ear.)

b. Project Impacts and Mitigation Measures.

Threshold 1:	*Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
Threshold 4:	*Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Impact N-1 **Temporary construction activity would create noise that could exceed City of San Luis Obispo Municipal Code regulations. Mitigation is available to address construction noise, but it may not be feasible to reduce the impact to less than the applicable threshold. Impacts would be Class I, *significant and unavoidable*.**

Construction of the project would occur in six phases between 2017 and 2023. Phases 1, 2, and 3 – which include the proposed residential build out – would be constructed between 2017 and 2020. Phases 4 and 5 – which include office and hotel build out – would be constructed between 2018 and 2023. Phase 6 – which includes commercial build out – would be constructed between 2017 and 2020. Table 4.10-12 shows typical noise levels associated with standard stationary and mobile construction equipment at distances of 50, 100, and 125 feet from the noise source. These distances have been used because the nearest residences are a minimum of 50 feet from the project boundary, 100 feet from the nearest proposed building pad, and 125 feet from the nearest proposed roadway. Typical construction noise levels at 50 feet from the source range from about 76 to 89 dBA. Grading/excavation activities generally create the highest construction noise levels because of the continuous operation of heavy equipment, although only a limited amount of equipment can operate near a given location at a particular time.

Table 4.10-11
Noise Ranges of Typical Construction Equipment

Construction Equipment	Typical Level (dBA) 50 feet	Typical Level (dBA) 100 feet	Typical Level (dBA) 125 feet
Mobile Equipment			
Backhoe	80	74	72
Compactor	82	76	74
Grader	85	79	77
Loader	85	79	77
Paver	89	83	81
Scraper	89	83	81
Truck	88	82	80
Stationary Equipment			
Air Compressor	80	74	72
Concrete Mixer	85	79	77
Concrete Pump	82	76	74
Crane	83	77	75
Generator	81	75	73
Jackhammer	88	82	80
Pneumatic Impact Equipment	85	79	77
Pump	76	70	68

Notes: Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table.
Noise levels assume a noise attenuation rate of 6 dBA per doubling of distance.
Source: U.S. Department of Transportation 2013.

The loudest pieces of equipment are the paver and scraper, which at 50 feet generate 89 dBA. These pieces of equipment would be used to construct the roads which would be a minimum of 125 feet from the nearest sensitive receptor, resulting in noise levels up to 81 dBA during road construction. The highest noise level that nearby residences would be exposed to during temporary construction activity would be 85 dBA during grading, which may occur as close as 50 feet from the nearest residence. This would exceed the single-family threshold of 60 dBA for relatively long-term construction activity (10 days or more) shown in Table 4.10-8.

In addition, the project would involve approximately 817,200 cubic yards (CY) of cut and 569,200 CY of fill during project site grading and excavation, resulting in a need for approximately 248,000 CY of soil import. Trucks hauling material to and from the site would be a source of construction noise. As shown in Table 4.10-12, noise from trucks can reach up to 88 dBA at 50 feet from the source. If hauling trucks traveled through residential neighborhoods or by sensitive receptors, noise levels may exceed the 75 dBA threshold for intermittent noise shown in Table 4.10-7 and impacts would be potentially significant.

Mitigative Components of the Specific Plan and Impact Conclusion. There are no components of the Specific Plan that would mitigate the impacts of construction noise.

Mitigation Measures. The following mitigation measures are required to minimize construction-related noise.

N-1(a) **Construction Vehicle Travel Route**. Construction vehicles and haul trucks shall utilize roadways which avoid residential neighborhoods and sensitive receptors where possible. The applicant shall submit a proposed construction vehicle and hauling route for City review and approval prior to grading/building permit issuance. The approved construction vehicle and hauling route shall be used for soil hauling trips prior to construction as well as for the duration of construction.

N-1(b) **Construction Activity Timing.** Except for emergency repair of public service utilities, or where an exception is issued by the Community Development Department, no operation of tools or equipment used in construction, drilling, repair, alteration, or demolition work shall occur daily between the hours of 7:00 PM and 7:00 AM, or any time on Sundays, holidays, or after sunset, such that the sound creates a noise disturbance that exceeds 75 dBA for single family residential, 80 dBA for multi-family residential, and 85 dBA for mixed residential/commercial land uses across a residential or commercial property line.

N-1(c) **Construction Equipment Best Management Practices (BMPs).** For all construction activity at the project site, noise attenuation techniques shall be employed to ensure that noise levels are maintained within levels allowed by the City of San Luis Obispo Municipal Code, Title 9, Chapter 9.12 (Noise Control). Such techniques shall include:

- Sound blankets on noise-generating equipment.
- Stationary construction equipment that generates noise levels above 65 dBA at the project boundaries shall be shielded with barriers that meet a sound transmission class (a rating of how well noise barriers attenuate sound) of 25.
- All diesel equipment shall be operated with closed engine doors and shall be equipped with factory-recommended mufflers.
- For stationary equipment, the applicant shall designate equipment areas with appropriate acoustic shielding on building and grading plans. Equipment and shielding shall be installed prior to construction and remain in the designated location throughout construction activities.

- Electrical power shall be used to power air compressors and similar power tools.
- The movement of construction-related vehicles, with the exception of passenger vehicles, along roadways adjacent to sensitive receptors shall be limited to the hours between 7:00 AM and 7:00 PM, Monday through Saturday. No movement of heavy equipment shall occur on Sundays or official holidays (e.g., Thanksgiving, Labor Day).
- Temporary sound barriers shall be constructed between construction sites and affected uses.

N-1(d) **Neighboring Property Owner Notification and Construction Noise Complaints.** The contractor shall inform residents and business operators at properties within 300 feet of the project site of proposed construction timelines and noise complaint procedures to minimize potential annoyance related to construction noise. Proof of mailing the notices shall be provided to the Community Development Department before the City issues a zoning clearance. Signs shall be in place before beginning of and throughout grading and construction activities. Noise-related complaints shall be directed to the City's Community Development Department.

Plan Requirements and Timing. Construction plans shall note construction hours, truck routes, and construction Best Management Practices (BMPs) and shall be submitted to the City for approval prior to grading and building permit issuance for each project phase. BMPs shall be identified and described for submittal to the City for review and approval prior to building or grading permit issuance. BMPs shall be adhered to for the duration of the project. The applicant shall provide and post signs stating these restrictions at construction site entries. Signs shall be posted prior to commencement of construction and maintained throughout construction. Schedule and neighboring property owner notification mailing list shall be submitted 10 days prior to initiation of any earth movement. The Community Development department shall confirm that construction noise reduction measures are incorporated in plans prior to approval of grading/building permit issuance.

All construction workers shall be briefed at a pre-construction meeting on construction hour limitations and how, why, and where BMP measures are to be implemented. A workday schedule will be adhered to for the duration of construction for all phases.

Monitoring. City staff shall ensure compliance throughout all construction phases. Building inspectors and permit compliance

staff shall periodically inspect the site for compliance with activity schedules and respond to complaints.

Significance After Mitigation. Project construction would represent a temporary source of noise to sensitive receptors adjacent to the project site and along the route used by haul trucks. Mitigation Measures N-1(a) through N-1(g) require implementation of noise reduction devices and techniques during construction, and would reduce noise associated with on- and off-site construction activity to the maximum extent feasible. As shown in Table 4.10-12, noise from trucks can reach up to 88 dBA at 50 feet from the source. Although Mitigation Measure N-1(a) would reduce impacts from haul trucks by requiring the haul route to avoid residential areas and noise sensitive uses where possible, haul truck noise would continue to exceed the 75 dBA threshold for intermittent noise shown in Table 4.10-7. Therefore, noise impacts from haul trucks would be minimized, but not eliminated. As a result, temporary noise impacts associated with off-site construction activity would be significant and unavoidable.

As shown in Table 4.10-12, residences would be exposed to temporary noise levels of up to 85 dBA during grading activities, which would occur 50 feet from the nearest residence. The available mitigation for this, and other construction activities would not reduce the noise associated with these activities below the applicable City standards for relatively long term construction activity shown in Table 4.10-8. Therefore temporary noise impacts associated with on-site construction activity would be significant and unavoidable.

Threshold 2:	*Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Impact N-2 **Short-term construction activities would generate intermittent levels of groundborne vibration. However, the expected vibration level during construction of the project would not be perceptible at the nearest residential receptors. This impact would be Class III, *less than significant*.**

Construction activities on the project site would generate low levels of groundborne vibration. Table 4.10-13 identifies vibration velocity levels based on distance from the receptor for the types of construction equipment that would be used on the project site during construction activities.

Table 4.10-12
Vibration Source Levels for Construction Equipment

Construction Equipment	Vibration Level (in/sec) [1]			
	25 feet	50 feet	100 feet	125 feet
Large Bulldozer	0.089	0.035	0.017	0.008
Loaded Trucks	0.076	0.031	0.011	0.007
Jackhammer	0.035	0.016	0.008	0.003
Small Bulldozer	0.003	0.001	<0.001	<0.001

*1 Calculated using equation from FTA Transit Noise and Vibration Impact Assessment (2006): PPVequip = PPVref * (25/D)^1.5*
Source: California Department of Transportation 2013.

As shown in Table 4.10-13, periodic vibration levels could reach up to 0.035 in/sec at 50 feet from construction activity, and up to 0.017 in/sec at 100 feet from construction activity. The nearest residential uses are a minimum of 50 feet from the project site boundary and a minimum of 100 feet from the nearest proposed building pads. Therefore, the maximum vibration level that a sensitive receptor would be exposed to as a result of project construction activity would be 0.035 in/sec.

Based on California Department of Transportation vibration criteria in Table 4.10-10, this level of vibration would be not be perceptible. In addition, construction activities that would result in vibration would be temporary and intermittent due to the nature of construction, and would only occur during daytime hours, when residents are generally less sensitive to vibration.

Mitigative Components of the Specific Plan and Impact Conclusion. There are no components of the Specific Plan that would mitigate the impacts of groundborne vibration from construction activity. However, groundborne vibration from construction activity would not be perceptible at any nearby sensitive receptor. Therefore, this impact would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 3:	*Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Impact N-3 **Project-generated traffic would incrementally increase traffic-related noise on study area roadway segments, except on Madonna Road near the project site, which would potentially affect existing noise-sensitive receptors along local roadways. However, the increase in traffic noise levels along area roadways would not exceed 3 dBA, which is the increase threshold typically audible to the human ear. Therefore, the effect of increased traffic noise would be Class III, *less than significant*.**

The project would generate an estimated 662 net new AM peak hour trips and 899 net new PM peak hour trips (refer to Section 4.12, *Transportation/Traffic*, and Appendix L). These trips would incrementally increase traffic noise on study area roadways, and would result in an increase in traffic noise at existing off-site sensitive receptors along affected roadways. (Long-term traffic noise impacts on the project site are discussed in Impact N-5.)

Average daily trips (ADT) were estimated from the traffic study's peak hour traffic values based on the standard assumption that peak hour traffic levels are typically approximately 10% of ADT. ADT was used to model the change in noise levels resulting from increased traffic on 21 roadway segments. In order to provide a conservative estimate of potential traffic noise increases over the lifetime of the project, the analysis included six scenarios – existing conditions, existing plus project conditions, cumulative (Year 2035) conditions with the Prado Road Interchange, cumulative (Year 2035) conditions with the Prado Road Overcrossing, and

both cumulative scenarios with the addition of project development and associated traffic. Modeled receptor locations are shown in Figure 4.10-3.

Table 4.10-14 shows estimated traffic noise levels at sensitive receptors along Froom Way, Los Osos Road, Madonna Road, Higuera Street, Calle Joaquin, and Prado Road, as well as the location of the noise measurement on Madonna Road performed by 45dB.com (Receptor "NM3"). As described in Section 4.10.3(a), *Methodology and Significance Thresholds*, this noise measurement location was modeled to calibrate the model. The 24-hour noise measurement collected at this location was 64 dBA CNEL, while the TNM model estimate for the same location (NM3 in Table 4.10-14) was 65 dBA CNEL. The observed 1 dBA CNEL difference between the measured and modeled traffic noise levels is within the acceptable margin-of-error of noise monitoring equipment and modeling programs. Therefore, the TNM model results are reflective of roadway noise in the vicinity of the project site.

Imagery provided by Google and its licensors © 2016.

Modeled Noise Receptor Locations

Figure 4.10-3

Table 4.10-13
Calculated Exterior Noise Associated with Traffic on Surrounding Roadways

Receptor Number/ Roadway	Projected Noise Level (dBA CNEL)						Change In Noise Level (dBA CNEL)		
	Existing [1]	Existing + Project [2]	Year 2035 Prado Road Interchange [3]	Year 2035 Prado Road Interchange + Project [4]	Year 2035 Prado Road Over-crossing [5]	Year 2035 Prado Road Over-crossing + Project [6]	Due to Project Traffic Under Existing+ Project Conditions [2]-[1]	Due to Project Traffic Under Year 2035 Future Prado Road Interchange Conditions [4]-[3]	Due to Project Traffic Under Year 2035 Future Prado Road Overcrossing Conditions [6]-[5]
NM3 / Madonna Rd	65.0	64.3	64.7	64.4	64.9	64.6	-0.7	-0.3	-0.3
SR1 / Madonna Rd	70.4	71.2	69.9	70.2	70.2	70.7	0.8	0.3	0.5
SR2 / Madonna Rd	69.9	70.1	69.9	70.1	70.0	70.1	0.2	0.2	0.1
SR3 / Madonna Rd	69.8	70.0	69.9	70.0	69.9	70.1	0.2	0.1	0.2
SR4 / Los Osos Rd	71.1	71.1	71.7	71.7	71.7	71.7	0.0	0.0	0.0
SR5 / Los Osos Rd	70.0	70.1	70.7	70.7	70.6	70.7	0.1	0.0	0.1
SR6 / Froom Way	63.3	63.7	65.3	65.5	65.3	65.6	0.4	0.2	0.3
SR7 / Los Osos Rd	70.8	70.8	71.7	71.8	72.1	72.1	0.0	0.1	0.0
SR8 / Higuera St	74.0	74.0	74.9	74.9	75.4	75.4	0.0	0.0	0.0
SR9 / Higuera St	73.8	73.8	74.9	74.9	74.9	75.4	0.0	0.0	0.5
SR10 / Higuera St	73.9	73.9	75.1	75.1	75.1	75.6	0.0	0.0	0.5
SR11 / Prado Rd	68.9	69.0	75.1	75.5	75.1	75.4	0.1	0.4	0.3
SR12 / Prado Rd	67.4	67.5	74.5	74.8	74.4	74.7	0.1	0.3	0.3
SR13 / Higuera St	73.3	73.3	75.3	75.6	75.8	75.9	0.0	0.3	0.1
SR14 / Higuera St	72.0	72.1	73.9	74.1	74.3	74.4	0.1	0.2	0.1
SR15 / Calle Joaquin	72.9	72.9	73.7	73.7	73.7	73.7	0.0	0.0	0.0
SR16 / Calle Joaquin	77.0	77.0	77.8	77.8	77.8	77.8	0.0	0.0	0.0
SR17 / Calle Joaquin	72.9	72.9	73.8	73.9	73.9	73.9	0.0	0.1	0.0
SR18 / Calle Joaquin	76.5	76.5	77.3	77.3	77.3	77.3	0.0	0.0	0.0
SR19 / Calle Joaquin	74.5	74.5	75.3	75.3	75.3	75.3	0.0	0.0	0.0
SR20 / Calle Joaquin	70.8	70.8	71.6	71.6	71.6	71.7	0.0	0.0	0.1
SR21 / Calle Joaquin	70.4	70.4	71.2	71.2	71.3	71.3	0.0	0.0	0.0

Refer to Appendix K for full noise model output. Modeled receptor locations are shown in Figure 4.10-3. Noise levels presented do not account for attenuation provided by existing barriers or future barriers; therefore, actual noise levels at sensitive receptor locations influenced by study area roadways may in many cases be lower than presented herein.
Source: Federal Highway Administration Traffic Noise Model 2.5

As shown in Table 4.10-14, the highest noise level increase that would result from project-added traffic on the local roadway network would be 0.8 dBA under existing plus project conditions at the location of an existing hotel (receptor SR1 in Table 4.10-14) located on Madonna Road between El Mercado and the U.S. 101 southbound onramp. Noise levels would decrease on the project site along Madonna Road under the Existing Plus Project and Cumulative Plus Project scenarios. Roadway noise increases associated with new traffic on all roadways would be less than 1 dBA under existing and future cumulative conditions for both the Full Build Prado Road Interchange and Prado Road Overcrossing scenarios.

Mitigative Components of the Specific Plan and Impact Conclusion. The San Luis Ranch Specific Plan emphasizes bikeways, pedestrian, and transit connections, all of which contribute to reduced vehicle trips and, correspondingly, reduced roadway noise impacts. As shown in Table 4.10-14, although the project would incrementally increase traffic noise in areas that are already above the City's standard for transportation noise sources, the project would not increase roadway noise by 3 dBA (the level typically audible to the human ear) on any study area roadway, which is the threshold for a significant traffic-related noise increase at existing receptors. Therefore, this impact would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. The project would not result in a significance noise increase along any local roadway. Therefore, this impact would be less than significant without mitigation.

Threshold 1:	*Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
Threshold 3:	*Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Impact N-4 **Future development on the project site would generate operational noise typically associated with residential, commercial, office, and hotel development. Noise from the project would not exceed acceptable levels at existing off-site sensitive receptors. However, noise from new on-site commercial uses may exceed applicable City standards at proposed on-site residences. This impact would be Class II, *less than significant with mitigation incorporated.***

The project includes single family and multifamily residential areas, a hotel, retail area, office area, open space areas, and an agricultural area. Each of these uses would include different sources of noise. In addition, the proposed residences would be sensitive receptors. The closest existing sensitive receptors are the residences to the west of the site. The proposed single family and multifamily residences would be closest to these existing residences. The noise generated by the proposed residences would consist of cars idling and parking, doors slamming, and children playing. These noise sources would be consist with the existing noise produced by the residences in the area.

The proposed hotel would be located in the eastern half of the project site, over 1,500 feet from the existing residences which are the nearest existing sensitive receptor and at least 450 feet from proposed new residences on the project site. Noise sources associated with the hotel would include cars idling, doors slamming, people talking, and HVAC systems. Due to the distance from sensitive receptors and the fact that there would be additional structures between the hotel and the nearest noise sensitive receptors, the hotel would not result in noise conflicts.

The proposed office areas would be located in the eastern half of the project site, approximately 1,000 feet from the nearest existing residences and at least 100 feet from proposed new residences on the project site. The office areas would generate noise associated with cars idling, doors slamming, people talking, and HVAC systems. Due to the distance from sensitive receptors and the fact that there would be additional structures between the office uses and the nearest existing noise sensitive receptors, these uses would not result in noise conflicts.

The project site plan indicates that open space areas would be scattered throughout the site. The open space area along Prefumo Creek would be approximately 100 feet from the nearest existing residences. The noises associated with this area would include people talking, children playing, and dogs barking. These noises would be similar to those of the existing residences and would not result in a noise conflict.

The agricultural area would make up the southern half of the site. The noise associated with this area would include equipment running and people working. This noise would be intermittent and would be the same as the noise currently experienced in the area since the site is currently under agricultural production.

The proposed retail areas would be located in the eastern half of the project site, approximately 1,000 feet from the nearest existing residences. The retail areas would generate noise associated with HVAC systems, garbage/loading dock areas, and parking lots. Due to the distance from existing sensitive receptors and the fact that there would be additional structures between the retail uses and the nearest existing noise sensitive receptors, these uses would not result in noise conflicts.

Proposed new residences on the project site would be located adjacent to the proposed retail areas on the eastern portion of the site (refer to Figure 2-6 in Section 2.0, *Project Description*). As indicated in Table 3-11 of the Specific Plan, retail buildings would be located as close as 25 feet from adjacent residences. Potential noise levels at on-site residence from HVAC, garbage/loading dock areas, and parking lots are discussed in the following paragraphs.

HVAC. HVAC units are generally shielded for noise, resulting in noise levels that do not exceed 55 dBA at 50 feet from the source (U.S. EPA, 1971). As shown in Table 4.10-8, the maximum noise level standard for stationary equipment at single-family residences is 60 dBA during the day (between 7 AM and 7 PM) and 50 dBA during evening and night (between 7 PM and 7AM) and all day Sunday. Therefore, noise from HVAC equipment would not exceed the City's daytime noise standards, but may exceed the City's noise nighttime standards at proposed on-site residential receptors.

Garbage/Loading Docks. Delivery and trash truck trips to the site would be a periodic source of operational noise. Maximum noise levels generated by medium-duty delivery trucks can reach 70 dBA at a distance of 25 feet, depending on the speed at which the truck is driving

(Olson, 1972). Loading and garbage areas may be located as close as 25 feet to the nearest on-site residential receptors. As shown in Table 4.10-7, the maximum noise level standard for intermittent sources of noise at single-family residences is 75 dBA during the day (between 7 AM and 7 PM) and 50 dBA during evening and night (between 7 PM and 7AM) and all day Sunday. Therefore, noise from delivery and garbage trucks would potentially exceed the City's nighttime noise standards.

Parking Lots. Typical noise sources associated with parking lots include tire squeal, doors slamming, car alarms, horns, and engine start-ups. Noise levels associated with parking lot activity at a distance of approximately 25 feet are shown in Table 4.10-16. The maximum source of parking lot noise at proposed residences would be from car horns and car alarm signals, which may reach 75 dBA at 25 feet from the source. These noise sources occur infrequently and do not occur for extended periods of time. More common noise sources include slow driving cars (autos at 14 mph), door slams and radios, and talking. As shown in Table 4.10-7, the maximum noise level standard for intermittent sources of noise at single-family residences is 75 dBA during the day (between 7 AM and 7 PM) and 50 dBA during evening and night (between 7 PM and 7AM) and all day Sunday. Depending on the final site plan and where the parking lots and buildings are placed in relation to one another, noise from parking lots may exceed the City's nighttime noise standard at new residences on the project site. The noise level from the parking lot would be below the 50 dBA nighttime threshold if parking areas are located a minimum of 250 feet from the property line of the nearest residences to the west, or if the parking areas are located a minimum of 150 feet from the property line of the nearest residences, with a building intervening line-of-sight between the parking area and the residential property.

Table 4.10-14
Parking Lot Noise Sources at 25 Feet

Source	Level (Lmax dBA)
Autos at 14 mph	56
Car Alarm Signal	75
Car Alarm Chirp	60
Car Horns	75
Door Slams or Radios	70
Talking	42
Tire Squeals	72

Source: Gordon Bricken & Associates, 1996. Estimates are based on actual noise measurements taken at various parking lots

Mitigative Components of the Specific Plan and Impact Conclusion. The San Luis Ranch Specific Plan orients proposed residential development adjacent to existing residences and proposed commercial development adjacent to existing commercial uses. As such, the project's proposed uses would be compatible with the existing noise environment of adjacent uses, and this impact would be less than significant. However, the Specific Plan does not include standards that would ensure that noise levels at on-site residences located adjacent to proposed retail uses would remain below applicable City standards. Therefore, this impact would be potentially significant.

Mitigation Measures. The following mitigation measures are required to ensure that noise levels from proposed new retail uses at residences on the project site would remain below City standards.

N-4(a) **HVAC Equipment.** Retail HVAC equipment shall be shielded and located on building rooftops, or a minimum of 100 feet from the nearest residential property line.

N-4(b) **Parking Lot/Loading Dock Orientation and Noise Barrier**. ~~Parking areas and loading docks within the proposed retail areas shall be located a minimum of 100 feet from the property lines of the nearest residential properties. For parking areas and loading docks located a minimum of 250 feet from the property line of residential properties to the west, or for parking areas and loading docks located a minimum of 150 feet from the property line of residential properties to the west with a building intervening line-of-sight between the parking area/loading dock and the residential property, no further mitigation would be required.~~

If parking areas or loading docks would be located ~~closer to the~~ within 250 feet of the residential properties to the west ~~than described above~~, a masonry noise barrier shall be installed along the eastern boundary of the proposed residences adjacent to the commercial land use area on the eastern portion of the project site. The noise barrier shall be constructed of any masonry material with a surface density of at least three pounds per square foot, and shall have no openings or gaps.

Plan Requirements and Timing: These requirements shall be incorporated into project site plans submitted for approval before the issuance of grading and building permits.

Monitoring: The Community Development Department shall verify compliance prior to issuance of operating permits. The Community Development Department shall site inspect to ensure development is in accordance with approved plans prior to occupancy clearance. Community Development staff shall verify compliance in accordance with approved building plans.

Significance After Mitigation. Implementation of Mitigation Measures N-4(a) and N-4(b) would ensure that HVAC and delivery/garbage truck noise would not exceed the City's maximum noise standards at adjacent residences on the project site. Typically, a properly-designed noise barrier would attain an insertion loss of 10 dBA (FHWA 2011). Therefore, the required mitigation would ensure that noise levels at residences on the project site would not exceed the City's standards for intermittent noise.

Threshold 1:	*Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Impact N-5 **Existing noise sources near the project site include vehicles on local roadways and U.S. 101. Development of the project would expose future residents on the project site to traffic noise from local roadways and U.S. 101. With mitigation, traffic noise levels on the project site would not exceed City standards. Therefore, this impact would be Class II, *less than significant with mitigation incorporated.***

As discussed in Section 4.10.1(c), *Existing Noise Environment,* the existing noise environment on the project site was analyzed in the Sound Level Assessment completed in February 2015. The analysis included four 24-hour sound level measurements, which were taken at locations along the perimeter of the project site, selected to represent potential noise receptors on the project site. The results of the 24-hour noise measurements were used to develop sound level contours for the project site, shown in Figure 4.10-1. The existing sound environment on the majority of the project site ranges from approximately 52 dBA CNEL to 57 dBA CNEL. The existing sound environment exceeds 60 dBA CNEL along Madonna Road in the northeast area of the project site and along U.S. 101 in the southeast area of the project site. Impacts specific to airport noise were found to be less than significant in the City's Initial Study (Appendix A), and are discussed in Section 4.14, *Issues Addressed in the Initial Study.*

The City's has adopted maximum noise exposure standards for residences, hotels, and office buildings affected by transportation noise sources (refer to Table 4.10-3). Table 4.10-17 shows estimated noise levels from roadway noise at the proposed residential buildings that would be located closest to new roadways on the project site (receptors PR1 through PR3, and PR7 shown on Figure 4.10-3). Table 4.10-17 also shows estimated roadway noise levels at proposed commercial retail, office, and hotel uses (receptors PR4 through PR6). Existing and future cumulative noise levels for both Year 2035 Full Build Prado Road Interchange and Year 2035 Full Build Prado Road Overcrossing scenarios were also modeled. As shown in Table 4.10-17, existing onsite noise levels at proposed residential, office, and hotel receptors on the project site would exceed the City's exterior standard of 60 dBA CNEL for sensitive land uses exposed to transportation noise sources. Future unmitigated noise levels are also shown on Figures 4.10-4, 4.10-5, and 4.10-6. The proposed hotel may include an outdoor recreation area (such as a pool). If the hotel includes outdoor activity areas, those areas would be exposed to traffic noise from U.S. 101 and Prado Road that may exceed the City's exterior standard of 60 dBA CNEL.

Imagery provided by Google and its licensors © 2016.

Unmitigated Existing + Project On-Site Noise Levels (dBA CNEL)

Figure 4.10-4

Imagery provided by Google and its licensors © 2016.

Unmitigated Year 2035 Prado Road Interchange + Project
On-Site Noise Levels (dBA CNEL)

Figure 4.10-5

Imagery provided by Google and its licensors © 2016.

Unmitigated Year 2035 Prado Road Overcrossing + Project On-Site Noise Levels (dBA CNEL)

Figure 4.10-6

Table 4.10-15
Estimated Exterior Sound Levels at Proposed Receptors
Associated with Traffic on Project Site and Surrounding Roadways

Receptor Number / Proposed Use	Nearest Roadways	Projected Noise Level (dBA CNEL)			
		Existing	Existing + Project	Year 2035 Prado Road Interchange + Project	Year 2035 Prado Road Over-crossing + Project
PR1 / Residences	Froom Way Extension through Project Site	61.3	62.8	66.9	66.7
PR2 / Residences	Froom Way Extension through Project Site	64.2	63.7	67.2	66.8
PR3 / Residences	Froom Way Extension through Project Site	66.7	65.7	69.3	69.1
PR4 / Commercial Retail	Dalidio Road	64.8	66.3	69.5	69.5
PR5 / Office	Dalidio Road and U.S. 101	71.0	71.1	73.2	73.0
PR6 / Hotel	Dalidio Road and U.S. 101	71.3	71.3	76.2	74.5
PR7 / Residences	Madonna Road	67.9	67.8	67.8	68.1

Refer to Appendix K for full noise model output. Modeled receptor locations are shown in Figure 4.10-3. Noise levels presented do not account for attenuation provided by existing barriers or future barriers; therefore, actual noise levels at sensitive receptor locations influenced by study area roadways may in many cases be lower than presented herein.
Source: Federal Highway Administration Traffic Noise Model 2.5

As described in Section 4.10.1(a), standard construction materials and techniques used for residential construction (i.e., conventional wood frame construction consistent with current California energy conservation requirements) normally result in a minimum exterior-to-interior noise attenuation of 15 dBA with windows open and 20 dBA with windows closed. The manner in which newer buildings, such as commercial and larger apartment buildings, are constructed generally provides a reduction of exterior-to interior noise levels of about 25 dBA with closed windows. Table 4.10-~~18~~16 shows the estimated interior noise levels with windows closed (CNEL).

Table 4.10-16
Calculated Interior Sound Levels at Proposed Receptors
Associated with Traffic on Project Site and Surrounding Roadways

Receptor Number / Proposed Use	Nearest Roadways	Projected Noise Level (dBA CNEL)			
		Existing	Existing + Project	Year 2035 Prado Road Interchange + Project	Year 2035 Over-crossing + Project
PR1 / Residences	Froom Way Extension through Project Site	41.3	42.8	46.9	46.7
PR2 / Residences	Froom Way Extension through Project Site	44.2	43.7	47.2	46.8
PR3 / Residences	Froom Way Extension through Project Site	46.7	45.7	49.3	49.1
PR4 / Commercial Retail	Dalidio Road	39.8	41.3	44.5	44.5
PR5 / Office	Dalidio Road and U.S. 101	46.0	46.1	48.2	48.0
PR6 / Hotel	Dalidio Road and U.S. 101	46.3	46.3	51.2	49.5
PR7 / Residences	Madonna Road	47.9	47.8	47.8	48.1

Refer to Appendix K for full noise model output. Noise levels presented do not account for attenuation provided by existing barriers or future barriers; therefore, actual noise levels at sensitive receptor locations influenced by study area roadways may in many cases be lower than presented herein.
Note: Accounts for "windows closed" exterior-to-interior reduction for office, hotel, and commercial uses (a reduction of 25 dBA) and residences (a reduction of 20 dBA) (FTA 2006).
Source: Federal Highway Administration Traffic Noise Model 2.5

With standard construction materials and techniques used for residential developments in Southern California, exterior-to-interior noise levels would not be reduced to below 45 dBA CNEL under Year 2035 cumulative conditions, and would therefore exceed the acceptable interior noise level for noise-sensitive land uses (standards are shown in Table 4.10-3).

Mitigative Components of the Specific Plan and Impact Conclusion. Section 3.8.2 of the Specific Plan (Commercial, Office, Hotel Design Guidelines) requires future development on the project site to include screen walls and fences around storage areas, open work areas, or refuse collection areas on the project site to be of sufficient height and material to protect adjacent properties and public streets from visual and noise impacts.

In addition, Section 2.6, Airport Compatibility Performance Standards, of the Specific Plan would require that all interior space of residential dwellings, as well as offices, meeting rooms, public reception areas, worker break rooms, and research, development, and production areas, meet the interior noise standard of 45 dBA CNEL and 60 dBA Lmax. However, the Specific Plan does not identify specific measures to achieve the interior noise standards identified in Section 2.6. Similarly, the Specific Plan does not include specific mitigative components that would

reduce future on-site traffic noise below the City's exterior noise standard of 60 dBA CNEL (see Table 4.10-3). Therefore, impacts related to interior and exterior noise on the project site would be potentially significant.

Mitigation Measures. The following mitigation measures would be required to reduce interior and exterior noise levels in outdoor activity areas of proposed residential, hotel, and office uses to a less than significant level.

N-5(a) **Interior Noise Reduction.** The project applicant shall implement the following measures, or similar combination of measures, which demonstrate that interior noise levels in proposed residences adjacent to Froom Ranch Way and Madonna Road, hotel, and offices would be reduced below the City's 45 dBA CNEL interior noise standard. The required interior noise reduction shall be achieved through a combination of standard interior noise reduction techniques, which may include (but are not limited to):

- In order for windows and doors to remain closed, mechanical ventilation such as air conditioning shall be provided for all units (Passive ventilation may be provided, if mechanical ventilation is not necessary to achieve interior noise standards, as demonstrated by a qualified acoustical consultant).
- All exterior walls shall be constructed with a minimum STC rating of 50, consisting of construction of 2 inch by 4 inch wood studs with one layer of 5/8 inch Type "X" gypsum board on each side of resilient channels on 24 inch centers and 3 ½ inch fiberglass insulation.
- All windows and glass doors shall be rated STC 39 or higher such that the noise reduction provided will satisfy the interior noise standard of 45 dBA CNEL.
- An acoustical test report of all the sound-rated windows and doors shall be provided to the City for review by a qualified acoustical consultant to ensure that the selected windows and doors in combination with wall assemblies would reduce interior noise levels sufficiently to meet the City's interior noise standard.
- All vent ducts connecting interior spaces to the exterior (i.e., bathroom exhaust, etc.) shall have at least two 90 degree turns in the duct.
- All windows and doors shall be installed in an acoustically-effective manner. Sliding window panels shall form an air-tight seal when in the closed position and the window frames shall be caulked to the wall opening around the perimeter with a non-hardening caulking compound to prevent sound infiltration. Exterior doors shall seal air-tight around the full perimeter when in the closed position.

The applicant shall submit a report to the Community Development Department by a qualified acoustical consultant certifying that the specific interior noise reduction techniques included in residential, hotel, and office components of the project would achieve interior noise levels that would not exceed 45 dBA CNEL.

N-5(b) **Residential Outdoor Activity Area Noise Attenuation.** Outdoor activity areas (e.g., patios and hotel pool areas) associated with shared multifamily residential recreational spaces, hotel, commercial, and office uses shall be protected from sound intrusion so that they meet the City's exterior standard of 60 dBA CNEL. Outdoor activity areas shall be oriented away from traffic noise such that intervening buildings reduce traffic noise or shall include noise barriers capable of reducing traffic noise levels to meet the City's exterior standard. Hotel pool areas shall be located a minimum of 500 feet from the U.S. 101 right-of-way. Noise barriers may be constructed of a material such as tempered glass, acrylic glass, or masonry material with a surface density of at least three pounds per square foot, and shall have no openings or gaps. The applicant shall submit a report to the Community Development Department by a qualified acoustic consultant certifying that the specific outdoor noise reduction techniques in combination with the orientation of outdoor activity areas of shared multifamily residential recreational spaces, hotel, commercial, and offices would achieve exterior noise levels that would not exceed 60 dBA CNEL.

N-5(c) **Froom Ranch Way Noise Barrier.** A masonry noise barrier or alternative barrier, such as a landscaped berm, shall be installed along the southern property line of residential lots that abut Froom Ranch Way to protect outdoor activity areas (patios and pools) at these residences from sound intrusion from traffic along Froom Ranch Way. The noise barrier or berm shall provide, at minimum, a 6 foot high barrier between Froom Ranch Way and the neighboring residences from the final grade of whichever use (i.e., Froom Ranch Way or residences) has a higher final elevation. If a masonry noise barrier is implemented, the~~The~~ noise barrier shall be constructed of any masonry material with a surface density of at least three pounds per square foot, and shall have no openings or gaps. If an alternative material is used, the developer shall submit a report to the Community Development Department by a qualified acoustical consultant certifying that the specific exterior noise reduction techniques included would achieve exterior noise levels that would not exceed 60 dBA CNEL.

N-5(d) **U.S. Highway 101 Noise Barrier at Hotel.** If the hotel includes an outdoor activity area (such as a patio or pool) a masonry noise barrier or alternative barrier, such as berms, landscaping, or glass, must be installed along the eastern property line of the hotel where it abuts the U.S. 101 right of way to protect these outdoor activity areas from sound intrusion from traffic along U.S. 101. If a masonry noise barrier is implemented,

~~The~~ the noise barrier shall provide, at minimum, an 8 foot high barrier between U.S. 101 and the hotel from the final grade of whichever use (i.e., U.S. 101 or hotel) has a higher final elevation. Such a ~~The~~ noise barrier shall be constructed of any masonry material with a surface density of at least three pounds per square foot, and shall have no openings or gaps. If an alternative material is used, the developer shall submit a report to the Community Development Department by a qualified acoustical consultant demonstrating that the specific exterior noise reduction techniques included in the hotel component of the project would achieve exterior noise levels that would not exceed 60 dBA CNEL.

Plan Requirements and Timing: These requirements shall be incorporated into all construction documents submitted for approval before the issuance of grading permits.

Monitoring: The Community Development Department shall verify compliance prior to issuance of grading permits. The Community Development Department shall site inspect to ensure development is in accordance with approved plans prior to occupancy clearance. Community Development staff shall verify installation in accordance with approved building plans.

Significance After Mitigation. Construction techniques described in Mitigation Measure N-5(a) would ensure that interior noise levels would not exceed the City's interior standard in proposed residential, hotel, and office uses. In addition, Mitigation Measure N-5(a) requires that a report prepared by a qualified acoustic engineer certifying that the specific interior residential, hotel, and office components of the project would achieve interior noise levels that would not exceed 45 dBA CNEL be submitted to the Community Development Department.

Typically, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a properly-designed noise barrier would attain an insertion loss of approximately 10 dBA (FHWA 2011). As shown in Table 4.10-19, with implementation of Mitigation Measures N-5(a) through N-5(b), exterior noise levels would not exceed the City's exterior standard (60 dBA CNEL) in outdoor activity areas associated with residential, hotel, and office uses.

Table 4.10-17
Mitigated Exterior Sound Levels at Proposed Receptors
Associated with Traffic on Project Site and Surrounding Roadways

Receptor Number / Proposed Use	Nearest Roadways	Projected Noise Level (dBA CNEL)		
		Existing + Project	Year 2035 Prado Road Interchange + Project	Year 2035 Prado Road Over-crossing + Project
PR1 / Residences [1]	Froom Way Extension through Project Site	52.8	56.9	56.7
PR2 / Residences [1]	Froom Way Extension through Project Site	53.7	57.2	56.8
PR3 / Residences [1]	Froom Way Extension through Project Site	55.7	59.3	59.1
PR5 / Office [2, 3]	Dalidio Road and U.S. 101	56.1	58.2	58
PR6 / Hotel [2, 3, 4]	Dalidio Road and U.S. 101	46.3	51.2	49.5
PR7 / Residences [3]	Madonna Road	57.8	57.8	58.1

Modeled receptor locations are shown in Figure 4.10-3. Noise levels reflect unmitigated traffic noise levels from Table 4.10-16 reduced based on Mitigation Measure N-5(a) through N-5(d), as described in the land-use specific footnotes.
[1] Unmitigated traffic noise reduced by 10 dBA at residential receptors along Froom Ranch Way (PR1, PR2, and PR3) due to the noise barrier required by Mitigation Measure N-5(c).
[2] Unmitigated traffic noise reduced by 5 dBA at office and hotel receptors (PR4 and PR5) due to building orientation required by Mitigation Measure N-5(b).
[3] Unmitigated traffic noise reduced by 10 dBA at multifamily residential, office, and hotel receptors (PR5, PR6, and PR7) due to inclusion of sound barriers required by Mitigation Measures N-5(b).
[4] Unmitigated traffic noise reduced by 10 dBA at hotel receptors (PR6) due to the noise barrier required by Mitigation Measure N-5(d).

As shown in Table 4.10-19, Mitigation Measures N-5(b) through N-5(d) would ensure that the City's exterior noise standard of 60 dBA CNEL would be achieved at affected land uses in the Specific Plan Area.

Standard construction materials and techniques used for residential construction (i.e., conventional wood frame construction consistent with current California energy conservation requirements) normally result in a minimum exterior-to-interior noise attenuation of 15 dBA with windows open and 20 dBA with windows closed. The manner in which newer buildings, such as commercial and larger apartment buildings, are constructed generally provides a reduction of exterior-to interior noise levels of about 25 dBA with closed windows. Table 4.10-19 shows that the exterior noise levels under the Prado Road Interchange scenario would range from 51.2 dBA CNEL to 59.3 dBA CNEL and 49.5 dBA CNEL to 59.1 dBA CNEL under the Prado Road Over-crossing scenario. The noise levels would be reduced by 20 dBA for the residences and 25 dBA for the commercial uses. Therefore, traffic noise would be reduced to 26.2 dBA CNEL to 29.3 dBA CNEL under the Prado Road Interchange scenario and 24.5 dBA CNEL to 39.1 dBA CNEL under the Prado Road Over-crossing scenario. Therefore, interior traffic noise levels would not exceed the City's 45 dBA interior noise standard, and this impact would be less than significant.

c. Cumulative Impacts. Table 4.10-14 shows cumulative noise increases along roadways near the project site due to cumulative traffic growth. Traffic noise levels along roadways in the project vicinity would not increase by more than 0.5 dBA due to cumulative traffic. This increase would not be significant based on the applicable traffic noise increase threshold of 3

4.11 RECREATION

4.11.1 Setting

a. Existing Park and Recreation Facilities. The City of San Luis Obispo currently features over 30 parks (including seven community parks, 10 neighborhood parks, and eight mini parks), one ten hole golf course, one community center, and multiple focused use facilities (such as the Senior Center, SLO Skate Park, Damon Garcia Sports Fields, Sinsheimer Stadium, and the SLO Swim Center). Currently, there are approximately 152 acres of parkland in the City, of which approximately 34 acres are neighborhood parks. In addition to developed parks, the City owns and/ or manages over 6,970 acres of open space within and adjacent to the City, providing passive recreational activities accommodate hiking and mountain biking (City of San Luis Obispo, Land Use and Circulation Element Update Environmental Impact Report [LUCE Update EIR], 2014). The general characteristics of the City's recreational facilities are described below. Currently, the San Luis Ranch Specific Plan Area is not located within the City of San Luis Obispo and no parkland exists on the site.

Community Parks. Community parks are intended to serve the entire community. Usually identified by unique features, community parks may be constructed for specialized and uses, and attract users from throughout the City whose recreational needs are not met in the community's smaller parks. The City currently has six community parks (which includes the Jack House Gardens and Mission Plaza), totaling approximately 113 acres (City of San Luis Obispo, 2014).

Neighborhood Parks. Neighborhood parks are defined as areas that are convenient and accessible for active and passive recreation to residents in adjacent and nearby neighborhoods. Neighborhood parks often include turf playfields, playground equipment, and landscaped picnic/seating areas, and may provide facilities such as hard-surfaced courts, restrooms, group barbecues, natural or cultural features, and on-site parking. The optimum site for a neighborhood park is in the center of a neighborhood within safe walking or bicycling distance of neighborhood residents. Playfields are sometimes a component of neighborhood parks and can provide opportunities for organized recreation activities. The City currently has ten neighborhood parks, totaling approximately 34 acres (City of San Luis Obispo, 2014).

Mini Parks. Mini parks are typically small recreational sites that provide neighborhoods or commercial areas with passive or active recreational facilities. This type of park may be appropriate in areas where larger parks are not feasible or accessible to residents and employees in the immediate area. The City currently has eight mini parks, totaling approximately five acres (City of San Luis Obispo, 2014).

Joint Use Sites. Joint use sites include facilities and/or properties where long-term uses are shared between the City and another agency through a formal agreement. Joint use facilities in the City include Sinsheimer Park as well as several fields and gymnasiums on San Luis Coastal Unified School District property located within the City that are available for scheduled recreation programs and public use after school hours (City of San Luis Obispo, 2014).

dBA. Therefore, the project's contribution to traffic noise would not be cumulatively considerable or significant.

Construction and operation of other projects in the vicinity of the project site may generate noise levels in excess of existing measured noise levels and may affect sensitive receptors in the project site vicinity. As described in Impact N-1, there are residences approximately 75 feet to the southwest and west of the project site, as well as Laguna Lake Park located approximately 110 feet to the north of the site. However, construction and operational noise would is localized in nature and generally does not contribute to cumulative noise impacts. Implementation of Mitigation Measures N-1(a) through N-1(h), Mitigation Measures N-4(a) and N-4(b), and Mitigation Measures N-5(a) through N-5(d) would reduce construction noise associated with buildout of the project, and would ensure that the project's contribution to cumulative noise impacts in the vicinity would be less than significant.