

## 4.6 NOISE

This section describes the existing noise conditions on and near the project site, potential environmental impacts, recommended mitigation measures to reduce or avoid noise impacts, and the level of significance after mitigation. The discussion of noise in this section was summarized from the *Noise Study for the East Area 1 Specific Plan, Santa Paula, California* included as Appendix F (Noise Study) of this EIR.

### 4.6.1 EXISTING CONDITIONS

#### 4.6.1.1 Noise Overview

##### Noise Descriptors

Noise is ordinarily described as unwanted sound. Sound is generally undesirable when it interferes with normal activities, causes actual physical harm, or has an adverse effect on health. The definition of noise as unwanted sound implies that it has an adverse effect on or causes a substantial annoyance to people and their environment.

Sound pressure level alone is not a reliable indicator of loudness because the human ear does not respond uniformly to sounds at all frequencies. For example, the human ear is less sensitive to low and high frequencies than to the medium frequencies that more closely corresponds to human speech. In response to the human ear's sensitivity, or lack thereof, to different frequencies, the A-weighted noise level, referenced in units of decibels (dB(A)), was developed to better correspond with peoples' subjective judgment of sound levels. In general, changes in a noise level of less than 3 dB(A) are not noticed by the human ear.<sup>1</sup>

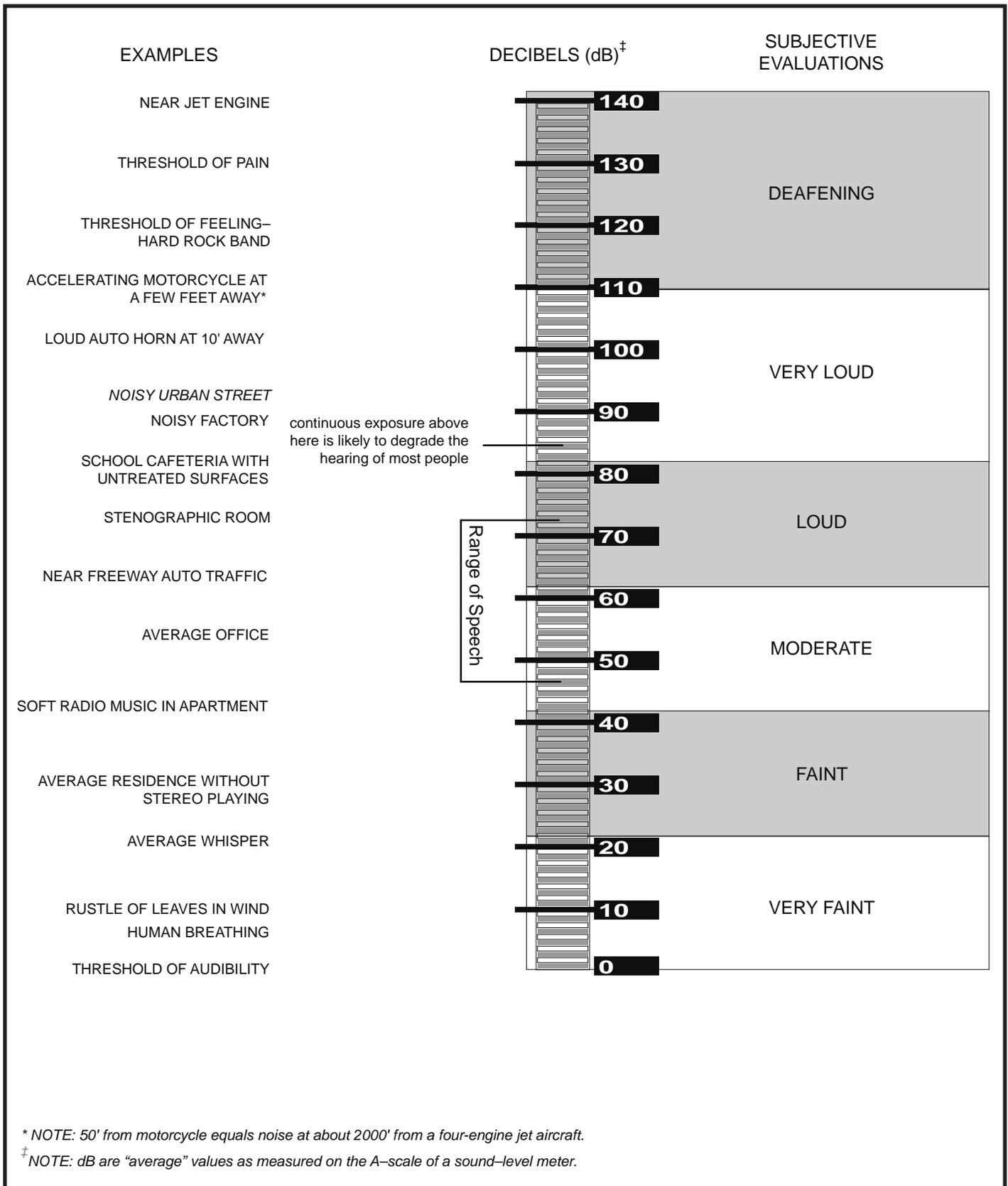
Changes from 3 to 5 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. An increase of greater than 5 dB(A) is readily noticeable, while the human ear perceives a 10 dB(A) increase in sound level to be a doubling of sound volume. A doubling of sound energy results in a 3 dB(A) increase in sound, which means that a doubling of sound wave energy (e.g., doubling the volume of traffic on a roadway) would result in a barely perceptible change in sound level. Common noise levels associated with certain activities are shown on Figure 4.6-1.

Noise sources occur in two forms: (1) point sources, such as stationary equipment or individual motor vehicles; and (2) line sources, such as a roadway with a large number of mobile point sources (motor vehicles). Sound generated by a stationary point source typically diminishes (attenuates) at a rate of 6 dB(A) for each doubling of distance from the source to the receptor at acoustically hard sites and at a rate of 7.5 dB(A) at acoustically soft sites.<sup>2</sup> A hard, or reflective, site does not provide any excess ground-effect attenuation and is characteristic of asphalt, concrete, and very hard-packed soil. An acoustically soft or absorptive site is characteristic of normal earth and most ground with vegetation. As an example, a 60 dB(A) noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dB(A) at 100 feet from the source and it would be 48 dB(A) at 200 feet from the source. Noise from the same point source at an acoustically soft site would be 52.5 dB(A) at 100 feet and 45 dB(A) at 200 feet from the source.

---

<sup>1</sup> U.S. Department of Transportation, Federal Highway Administration, *Highway Noise Fundamentals*, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 81.

<sup>2</sup> *Ibid*, p. 97.



\* NOTE: 50' from motorcycle equals noise at about 2000' from a four-engine jet aircraft.

<sup>‡</sup> NOTE: dB are "average" values as measured on the A-scale of a sound-level meter.

Source: Impact Sciences, Inc. - March 2007

Figure 4.6-1  
Common Noise Levels

Sound generated by a line source typically attenuates at a rate of 3 dB(A) and 4.5 dB(A) per doubling of distance from the source to the receptor for hard and soft sites, respectively.<sup>3</sup> Artificial or natural barriers can also attenuate sound levels. Solid walls and berms may reduce noise levels by 5 to 10 dB(A).<sup>4</sup> The minimum attenuation of exterior to interior noise provided by typical structures in California is provided in Table 4.6-1.

**TABLE 4.6-1  
OUTSIDE TO INSIDE NOISE ATTENUATION (dB(A))**

<b>BUILDING TYPE</b>	<b>OPEN WINDOWS</b>	<b>CLOSED WINDOWS*</b>
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Convalescent Homes	17	25
Offices	17	25
Theaters	20	30
Hotels/Motels	17	25

Source: *Transportation Research Board, National Research Council, Highway Noise: A Design Guide for Highway Engineers, National Cooperative Highway Research Program Report 117.*

\*As shown, structures with closed windows can attenuate exterior noise by a minimum of 25 to 30 dB(A).

When assessing community reaction to noise, there is an obvious need for a scale that averages sound pressure levels over time and quantifies the result in terms of a single numerical descriptor. Several scales have been developed that address community noise levels. Those that are applicable to this analysis are the energy-equivalent sound level ( $L_{eq}$ ) and Community Noise Equivalent Level (CNEL).  $L_{eq}$  is the average A-weighted sound level measured over a given time interval.  $L_{eq}$  can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is another average A-weighted sound level measured over a 24-hour time period. However, this noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained by adding 5 dB(A) to sound levels occurring during the evening from 7:00 P.M. to 10:00 P.M., and 10 dB(A) to sound levels occurring during the nighttime from 10:00 P.M. to 7:00 A.M. The 5 and 10 dB(A) penalties are applied to account for increased noise sensitivity during the evening and nighttime hours. The logarithmic effect of adding these penalties to the 1-hour  $L_{eq}$  measurements typically results in a CNEL measurement that is within approximately 3 dB(A) of the peak-hour  $L_{eq}$ .<sup>5</sup>

### Vibration

Vibration is a unique form of noise. It is unique because its energy is carried through structures and the earth, whereas, noise is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise; e.g., the rattling of windows from truck pass-bys. This phenomenon is related to the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, ground-borne vibration generated by man-made activities attenuates rapidly as distance from the source of the vibration increases. Vibration, which spreads through the ground rapidly, diminishes in amplitude with distance from the source. The ground motion caused by vibration is measured as particle velocity in inches per second and, in the U.S. is

<sup>3</sup> U.S. Department of Transportation, Federal Highway Administration, *Highway Noise Fundamentals*, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 97.

<sup>4</sup> *Ibid*, p. 18.

<sup>5</sup> California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, (Sacramento, California: October, 1998), pp. N51-N54.

referenced as vibration decibels (VdB).

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity 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 ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is barely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Figure 4.6-2 identifies the typical ground-borne vibration levels in VdB and human response to different levels of vibration.

### Sensitive Receptors

Some land uses are recognized as being more sensitive to noise levels and vibration than others. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks, and outdoor recreation areas are generally more sensitive to noise and vibration than are commercial and industrial land uses. In the immediate vicinity of the project site, existing sensitive receptors include single-family residences across Santa Paula Creek to the west of the project site.

#### 4.6.1.2 Existing Noise Environment

##### On-Site Noise and Vibration Environment

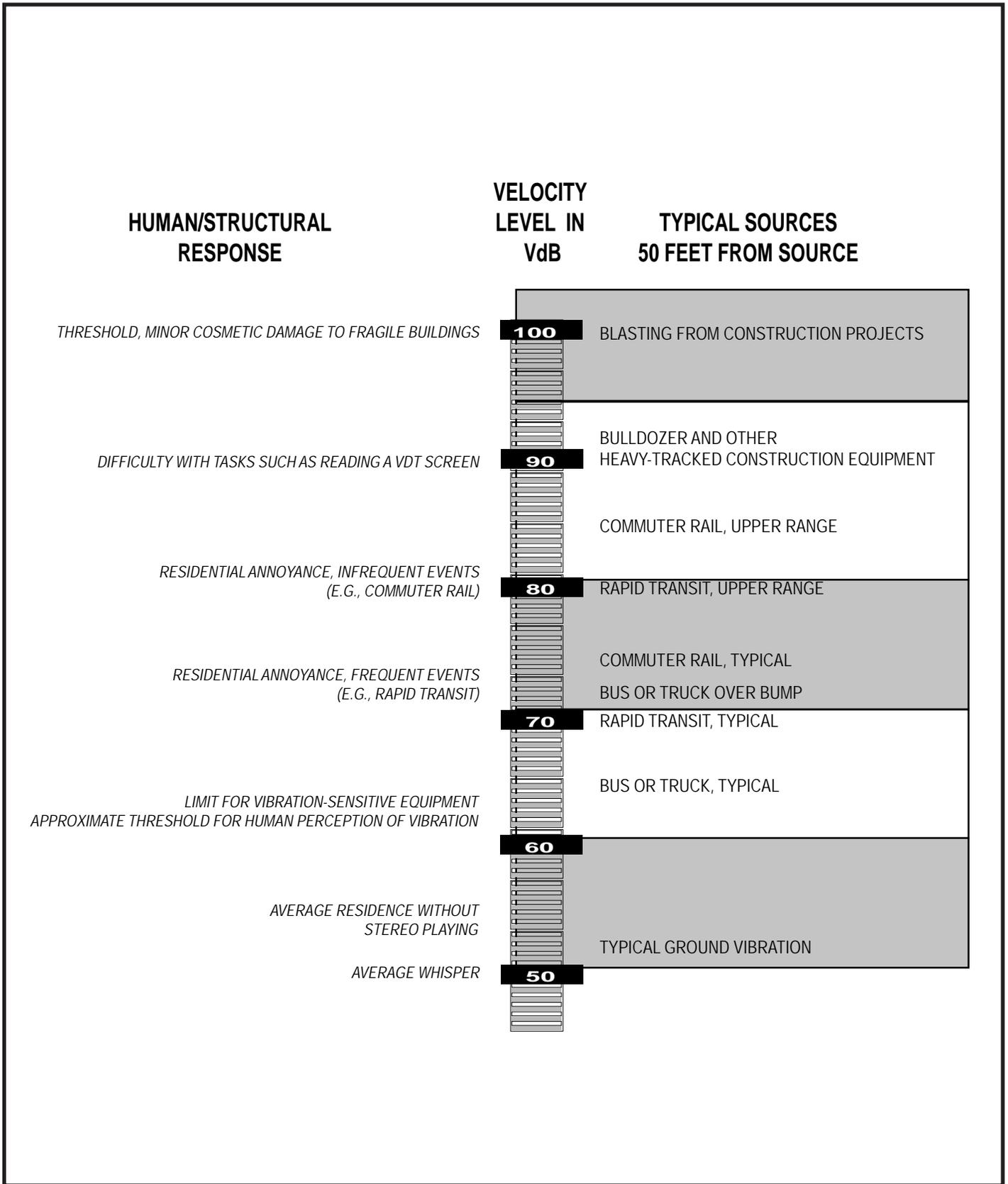
Existing on-site noise sources include farm equipment, motor vehicles, and activities associated with the on-site residences. Periodic winds also characterize the on-site noise environment. Currently, no significant source of vibration exists on the project site. Table 4.6-2 contains the results of the existing conditions monitoring conducted for on- and off-site areas of the project site. As shown, noise levels within the center of the project site (location 2) were 57.2 CNEL, while those at the southeastern corner (location 3) were 68.5 CNEL.

**TABLE 4.6-2  
MONITORED NOISE LEVELS**

<b>MONITORING LOCATION</b>	<b>NOISE LEVEL</b>
1. West of Santa Paula Creek	54.3 CNEL
2. Center of the Project Site	57.2 CNEL
3. Southeastern Corner of the Project Site Adjacent to SR-126	68.5 CNEL
4. 50 feet from Fillmore & Western Railway Company Railroad Tracks	93.3 L <sub>max</sub> *

Source: *Impact Sciences, Inc., April 2007.*

\*The L<sub>max</sub> is the maximum noise level measured during monitored train passing.



Source: Impact Sciences, Inc. - March 2007

Figure 4.6-2  
Typical Levels of Ground-Borne Vibration

### Off-Site Noise and Vibration Environment

Primary off-site noise sources include traffic along nearby roads and SR-126, and trains traveling along the Fillmore & Western Railway Company (previously known as the Santa Paula Branch of the Southern Pacific Railroad) railroad tracks. Trains traveling along the Fillmore & Western Railway Company railroad tracks are also an off-site source of ground-borne vibration.

Historically, the Fillmore & Western Railway Company railroad tracks has accommodated rail traffic, connecting passenger trains with Ventura, Fillmore, and the cities of northern Los Angeles. Commuter rail traffic was discontinued along the Fillmore & Western Railway Company railroad tracks with the removal of tracks between Piru and Santa Clarita. Currently, the Fillmore & Western Railway Company operates tourist-oriented trains between 12:00 P.M. and 3:00 P.M. on Saturdays and Sundays.<sup>6</sup> The tracks are also used by one freight train, which passes by the project site twice, traveling once in each direction, on Mondays, Wednesdays, and Fridays between the hours of 8:00 A.M. and 12:00 P.M.<sup>7</sup>

The Fillmore & Western Railway Company railroad right-of-way was purchased in 1995 by the Ventura County Transportation Commission (VCTC). Long-term plans for the Fillmore & Western Railway Company have not been developed and the ultimate use of the rail corridor is uncertain. However, extending the railroad tracks to Port Hueneme and Santa Clarita to accommodate Metrolink commuter trains, Amtrak passenger trains and some freight traffic is being considered by the VCTC.<sup>8</sup>

The Santa Paula Airport is located on a 38-acre site south of SR-126, approximately one mile southwest of the project site. The Santa Paula Airport currently operates as an uncontrolled public-use facility and is not used for commercial purposes. A single 2,650-foot runway generally supports propeller-driven aircraft. According to the Noise Element of the Santa Paula General Plan, aircraft noise is generally not a problem in the City because the general aircraft travel pattern is south of the City, over the Santa Clara River, and the required approach and departure altitude is at least 1,500 feet.<sup>9</sup> The Noise Element identifies the primary noise concern associated with the airport as aerobatics, which are periodically practiced east of the City. Figure N-2 of the Noise Element, provided as Figure 4.6-3 of this EIR shows noise contours from SR-126, SR-150 and the airport. As shown, the combined 60 dB(A) CNEL noise contour extends approximately 1,000 feet into the southern portion of the project site.<sup>10</sup>

Table 4.6-2 contains the results of the existing conditions monitoring conducted for on- and off-site areas of the project site. As shown, noise levels in the residential community across Santa Paula Creek (location 1) to the west of the project site were 54.3 CNEL, while those adjacent to the Fillmore & Western Railway Company (location 4) were 93.3 dB(A)<sup>11</sup>.

Figure 4.6-4 shows the on- and off-site noise monitoring locations for the areas discussed previously.

<sup>6</sup> Fillmore & Western Railway Company. "Weekend Scenic Excursion 2007." 30 April 2007.

[http://www.fwry.com/weekend/weekend\\_2007.html](http://www.fwry.com/weekend/weekend_2007.html).

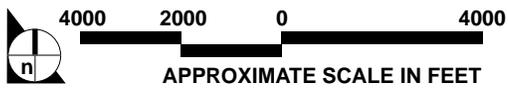
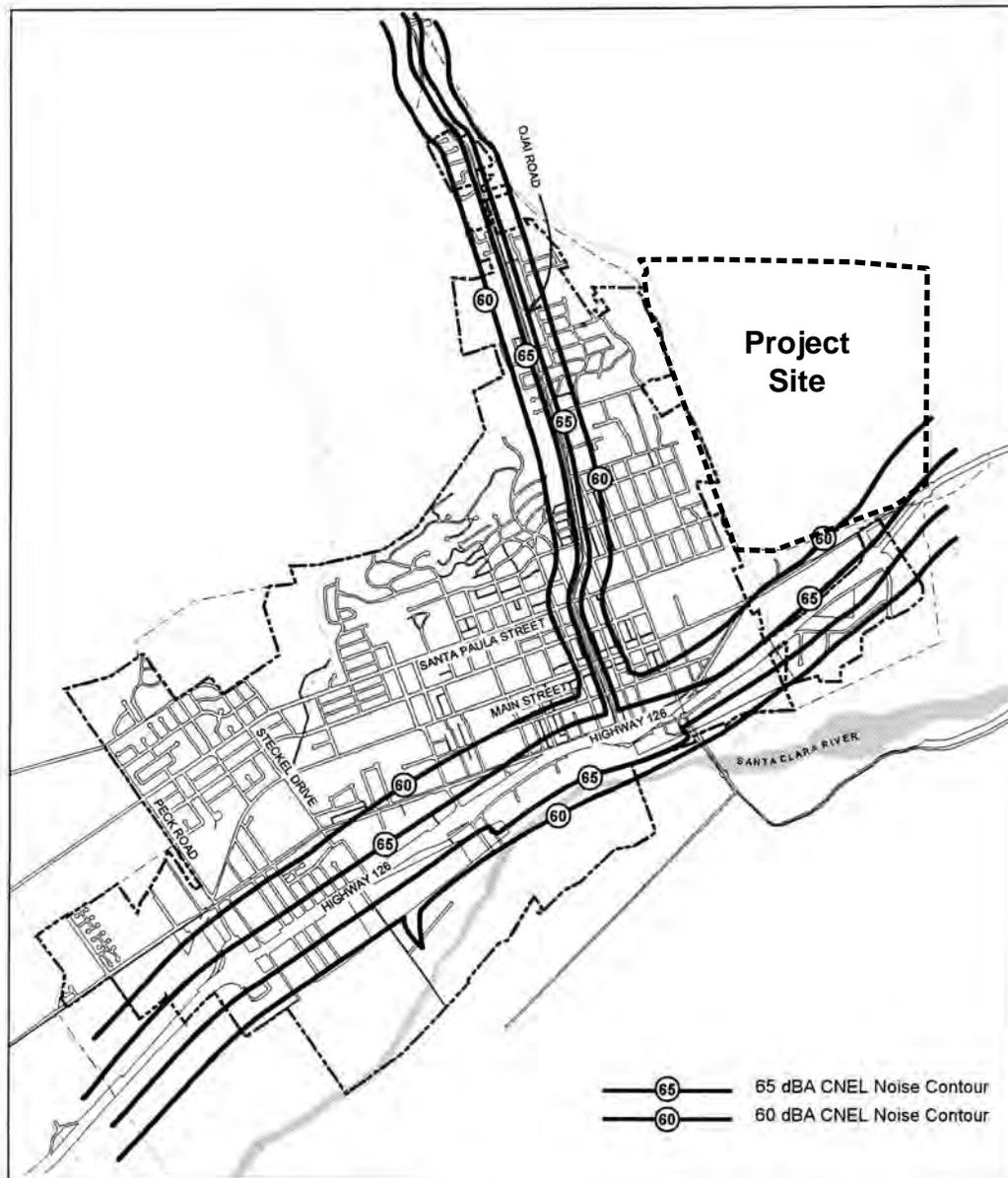
<sup>7</sup> Impact Sciences, Inc. *Noise Study for the East Area 1 Specific Plan, Santa Paula, California*. August 2007.

<sup>8</sup> Impact Sciences, Inc. *Noise Study for the East Area 1 Specific Plan, Santa Paula, California*. August 2007.

<sup>9</sup> *Ibid.*

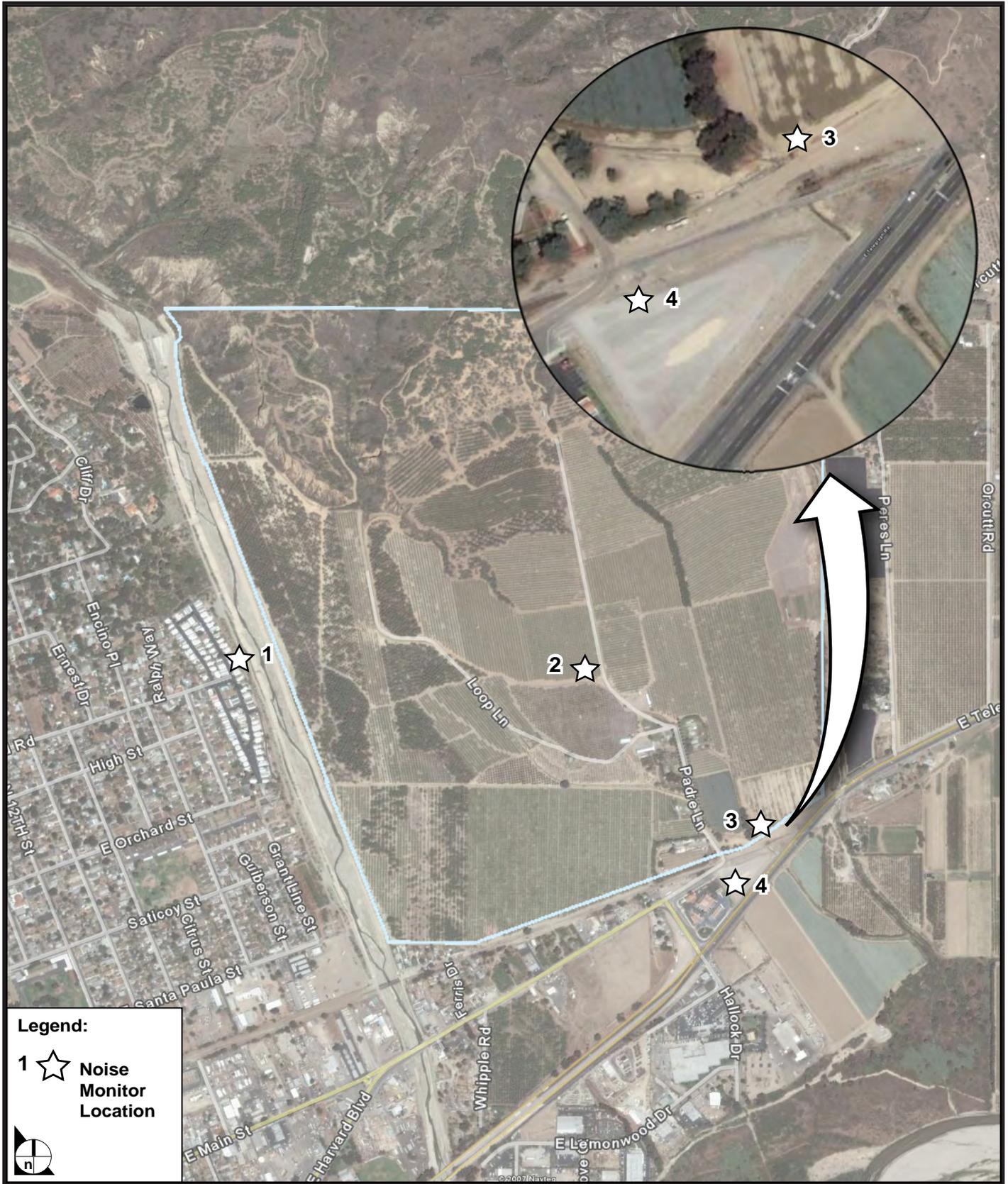
<sup>10</sup> City of Santa Paula. "Noise Element." *City of Santa Paula General Plan*. 13 April 1998. p. N-7.

<sup>11</sup> Note: This represents the maximum sound level measured while a train passed along the Fillmore & Western Railway at a distance of 50 feet.



Source: City of Santa Paula General Plan - November 2000

Figure 4.6-3  
**City of Santa Paula General Plan Figure N-2 - Existing Noise Contours**



Source: AirPhoto USA - 2005, Impact Sciences, Inc. - April 2007

Figure 4.6-4  
Noise Monitoring Locations

Roadway Noise

Table 4.6-3 includes model results for 44 roadway segments that correspond with those in the project traffic study<sup>12</sup> within the vicinity of the project site.

**TABLE 4.6-3  
MODELED EXISTING ROADWAY NOISE LEVELS**

<b>ROADWAY SEGMENT</b>	<b>NOISE LEVEL IN DB(A) CNEL AT 75 FEET FROM ROADWAY CENTERLINE</b>
1. Hallock Dr.: SR-126 and Telegraph Rd.	57.4
2. Telegraph Rd.: Harvard Blvd. and Hallock Dr.	59.2
3. Harvard Blvd.: 12 <sup>th</sup> St. and Main St.	56.4
4. S. Mountain Rd.: Harvard Blvd. and Lemon Rd.	56.7
5. Main St.: 12 <sup>th</sup> St. and Harvard Blvd.	58.2
6. 12 <sup>th</sup> St.: Harvard Blvd. and Main St.	57.8
7. 12 <sup>th</sup> St.: Main St. and Santa Barbara St.	58.9
8. 12 <sup>th</sup> St.: Santa Barbara St. and Santa Paula St.	59.0
9. Santa Paula St.: 12 <sup>th</sup> St. and 10 <sup>th</sup> St.	56.7
10. Ojai Rd.: Santa Paula St. and Saticoy St.	61.5
11. Ojai Rd.: Saticoy St. and Orchard St.	63.0
12. Ojai Rd.: Orchard St. and Richmond Rd.	63.1
13. 10 <sup>th</sup> St.: Santa Paula St. and Santa Barbara St.	62.3
14. Santa Barbara St.: 10 <sup>th</sup> St. and 12 <sup>th</sup> St.	55.9
15. 10 <sup>th</sup> St.: Santa Barbara St. and Main St.	61.8
16. Main St.: 10 <sup>th</sup> St. and 12 <sup>th</sup> St.	56.1
17. 10 <sup>th</sup> St.: Main St. and Harvard Blvd.	61.9
18. 10 <sup>th</sup> St.: Harvard Blvd. and SR-126	63.2
19. 10 <sup>th</sup> St.: SR-126 On/Off Ramps North and South	60.1
20. Harvard Blvd.: 10 <sup>th</sup> St. and 12 <sup>th</sup> St.	61.6
21. Harvard Blvd.: 8 <sup>th</sup> St. and 10 <sup>th</sup> St.	62.8
22. 8 <sup>th</sup> St.: Harvard Blvd. and Main St.	58.5
23. Main St.: 8 <sup>th</sup> St. and 10 <sup>th</sup> St.	57.8
24. 8 <sup>th</sup> St.: Main St. and Santa Paula St.	57.9
25. Santa Paula St.: 8 <sup>th</sup> St. and 10 <sup>th</sup> St.	59.4
26. Santa Paula St.: Palm Ave. and 6 <sup>th</sup> St.	60.5
27. Harvard Blvd.: Palm Ave. and 8 <sup>th</sup> St.	63.6
28. Main St.: Palm Ave. and 8 <sup>th</sup> St.	58.7
29. Palm Ave.: Santa Paula St. and Santa Barbara St.	58.9
30. Palm Ave.: Santa Barbara St. and Main St.	60.3
31. Palm Ave.: Main St. and Harvard Blvd.	61.5
32. Palm Ave.: Harvard Blvd. and SR-126	62.1
33. Palm Ave.: SR-126 On/Off Ramps North and South	60.0
34. Harvard Blvd.: Steckel Dr. and Palm Ave.	64.2
35. Harvard Blvd.: Peck Rd. and Steckel Dr.	63.4
36. Steckel Dr.: Harvard Blvd. and Main St.	57.9
37. Main St.: Steckel Dr. and Palm Ave.	58.9
38. Steckel Dr.: Main St. and Santa Paula St.	56.0
39. Santa Paula St.: Steckel Dr. and Palm Ave.	60.1
40. Santa Paula St.: Peck Rd. and Steckel Dr.	58.4
41. Peck Rd.: Telegraph Rd. and Santa Paula St.	61.8

<sup>12</sup>Fehr & Peers/ Kaku Associates. *Traffic Impact Analysis for the Santa Paula East Area 1 Specific Plan*. July 2007.

**TABLE 4.6-3  
MODELED EXISTING ROADWAY NOISE LEVELS**

<b>ROADWAY SEGMENT</b>	<b>NOISE LEVEL IN DB(A) CNEL AT 75 FEET FROM ROADWAY CENTERLINE</b>
42. Peck Rd.: Faulkner Rd. and Telegraph Rd.	62.0
43. Faulkner Rd.: SR-126 and Peck Rd.	60.8
44. Peck Rd.: Faulkner Rd. and SR-126	60.4
45. SR-126 east of Hallock Dr.	75.9
46. SR-126 between 10 <sup>th</sup> St. and Hallock Dr.	75.8

Source: Impact Sciences, July 2007.

#### 4.6.1.3 Regulatory Setting

##### City of Santa Paula General Plan Noise Element

As required by Government Code § 65302(f), the Noise Element of the City of Santa Paula General Plan evaluates the existing and future noise environment and associated noise sources and sets goals, objectives and policies to limit noise exposure and address specific noise sources in the City.

The following three goals are established by the Noise Element.

- Existing exposure of citizens to excessive noise sources should be reduced.
- Development should mitigate undue generation of noise.
- The City of Santa Paula should consider the noise environment as part of land use planning.

Following the goals listed above, the Noise Element includes a series of objectives and policies followed by associated implementation measures. Relevant and applicable ordinance and development standards from the Noise Element are listed below.<sup>13</sup>

1. Amend the development code as necessary to account for the policies and programs contained in the Noise Element.
2. Establish exterior land use noise compatibility standards in the Development Code for all new development based on the guidelines shown on Figure N-1 of this Noise Element.
3. Incorporate in the development code requirements that limit maximum interior levels to 45 dB(A) CNEL in all new residential construction.
  - 3a. For new development within the generalized 60 dB(A) CNEL noise contour as shown in Figure N-4 of this Noise Element, project applicants shall fund site-specific noise studies to mitigate project impacts. The determination of whether a project is within the 65 dB(A) contour is the responsibility of the Planning Department.
  - 3b. When development is subject to noise levels requiring mitigation, the following measures shall be considered and preference shall be given in the following order:
    1. Site layout, including setbacks, open space separation and shielding of noise sensitive uses with non-noise-sensitive uses.
    2. Acoustical treatment of buildings.
    3. Structural measures: construction of earthen berms or wood or concrete barriers.

<sup>13</sup> City of Santa Paula Noise Element, 13, April, 1998, page N-19.

Figure N-1, Noise Compatibility Matrix contained within the City of Santa Paula General Plan, provides compatibility guidelines for various land uses. This noise compatibility matrix, provided as Figure 4.6-5 (City of Santa Paula Noise Compatibility Matrix) of this EIR, is reflected in the thresholds of significance in Section 4.6.2 of this EIR.

#### City of Santa Paula Municipal Code

The project site is located outside the City's corporate boundary and its sphere of influence, but within its Area of Interest. The East Area 1 project site is identified as an Expansion Area in the General Plan and is proposed for annexation to the City. Santa Paula Municipal Code ("SPMC") Chapter 93 sets noise standards for land uses within the City. SPMC § 93.21 establishes the acceptable exterior noise standard for residential uses of 65 dB(A) from 7:00 A.M. through 10:00 P.M. and 60 dB(A) from 10:00 P.M. through 7:00 A.M. The exterior noise level standard for other noise-sensitive uses, including schools, libraries, hospitals, community care facilities and assembly halls is 65 dB(A) at all times. According to the SPMC, commercial and office uses cannot exceed an outdoor noise level of 70 dB(A) and neighborhood commercial uses cannot experience an external noise level of more than 65 dB(A). Industrial uses cannot exceed an external noise level of more than 75 dB(A). The SPMC does not set acceptable interior noise level standards.

It should be noted that the City of Santa Paula General Plan Noise Element Implementation Measure No. 1 calls for the Development Code (Title 16 of the SPMC) to be amended as necessary to account for the policies and programs contained in the Noise Element.

SPMC § 93.23 states that construction activities between 8:00 A.M. and 6:00 P.M. Monday through Friday are exempt from the noise standards set in SPMC § 93.21. A notice listing the times between which construction activities can take place, titled in letters at least one inch in height and placed at least five feet above ground level, must be posted at all entrances to a construction site.

#### Ventura County General Plan

The project site is currently located in the unincorporated portion of Ventura County. The proposed project would be implemented if annexed to the City of Santa Paula. However, two roadway segments studied within this noise impact analysis are and would remain under Ventura County jurisdiction. The two Ventura County roadway segments are: (1) Telegraph Road between Harvard Boulevard and Hallock Drive; and (2) South Mountain Road between Harvard Boulevard and Lemon Road. In addition, there are unincorporated areas (including residences and businesses) located immediately west (across Santa Paula Creek) and south (adjacent to the Fillmore & Western Railway Company right-of-way) of the project site which are also analyzed.

The Ventura County General Plan identifies the following goal, policies and programs relative to noise:

##### *2.16.1 Goal*

*To protect the health, safety and general welfare of County residents by elimination or avoidance of adverse noise impacts on existing and future noise sensitive uses.*

	55	60	65	70	75	80	dBA
RESIDENTIAL - LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES							
RESIDENTIAL - MULTI-FAMILY							
TRANSIENT LODGING - MOTELS, HOTELS							
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES							
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES							
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS							
PLAYGROUNDS, NEIGHBORHOOD PARKS							
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES							
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL							
INDUSTRIAL, MANUFACTURING, UTILITIES, AGRICULTURE							

**INTERPRETATION**

**NORMALLY ACCEPTABLE**  
Specified land use is satisfactory, based upon the assumption that any buildings involved are 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 the noise reduction requirements is made and needed noise insulation features included in the 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 the noise reduction requirements must be made and needed noise insulation features included in the design.

**CLEARLY UNACCEPTABLE**  
New construction or development should generally not be undertaken.

Source:  
Calif. Dept. of Health,  
Guidelines for Preparation and Content  
of Noise Elements of General Plans, 1976

Source: City of Santa Paula General Plan - November 2000

Figure 4.6-5  
City of Santa Paula Noise Compatibility Matrix

### 2.16.2 Policies

1. All discretionary development shall be reviewed for noise compatibility with surrounding uses. Noise compatibility shall be determined from a consistent set of criteria based on the standards listed below. An acoustical analysis by a qualified acoustical engineer shall be required of discretionary developments involving noise exposure or noise generation in excess of the established standards. The analysis shall provide documentation of existing and projected noise levels at on-site and off-site receptors, and shall recommend noise control measures for mitigating adverse impacts.

(1) Noise sensitive uses proposed to be located near highways, truck routes, heavy industrial activities and other relatively continuous noise sources shall incorporate noise control measures so that:

a. Indoor noise levels in habitable rooms do not exceed CNEL 45.

b. Outdoor noise levels do not exceed CNEL 60 or Leq1H of 65 dB(A) during any hour.

(2) Noise sensitive uses proposed to be located near railroads shall incorporate noise control measures so that:

a. Guidelines (1)a. and (1)b. above are adhered to.

b. Outdoor noise levels do not exceed L10 of 60 dB(A).

(3) Noise sensitive uses proposed to be located near airports:

a. Shall be prohibited if they are in a CNEL 65 or greater, noise contour.

b. Shall be permitted in the CNEL 60 to CNEL 65 noise contour area only if means will be taken to ensure interior noise levels of CNEL 45 or less.

(4) Noise generators, proposed to be located near any noise sensitive use, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:

a. Leq1H of 55dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 A.M. to 7:00 P.M.

b. Leq1H of 50dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 7:00 P.M. to 10:00 P.M.

Ventura County General Plan - GOALS, POLICIES & PROGRAMS (12-6-05 edition) 49

c. Leq1H of 45dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 10:00 P.M. to 6:00 A.M. Section 2.16.2(4) is not applicable to increased traffic noise along any of the roads identified within the 2020 Regional Roadway Network (Figure 4.2.3) Public Facilities Appendix of the Ventura County General Plan (see 2.16.2-1(1)). In addition, State and Federal highways, all railroad line operations, aircraft in flight, and public utility facilities are noise generators having Federal and State regulations that preempt local regulations.

(5) Construction noise shall be evaluated and, if necessary, mitigated in accordance with the County Construction Noise Threshold Criteria and Control Plan.

2. Discretionary development which would be impacted by noise, or generate project related noise which cannot be reduced to meet the standards prescribed in Policy 2.16.2-1., shall be prohibited. This policy does not apply to noise generated during the construction phase of a project.

3. The priorities for noise control shall be as follows:

(1) Reduction of noise emissions at the source.

(2) Attenuation of sound transmission along its path, using barriers, landforms modification, dense plantings, and the like.

(3) *Rejection of noise at the reception point via noise control building construction, hearing protection or other means.*<sup>14</sup>

#### California Code of Regulations

The California Noise Insulation Standards of 1988<sup>15</sup> require that interior noise levels from the exterior sources do not exceed 45 decibels CNEL/L<sub>dn</sub> in any habitable room of a multi-residential use facility (e.g., hotels, motels, dormitories, long-term care facilities, and apartment houses and other dwellings, except detached single-family dwellings) with doors and windows closed. Where exterior noise levels exceed 60 dB(A) CNEL/L<sub>dn</sub>, an acoustical analysis is required to show that the proposed construction will reduce interior noise levels to 45 dB(A) CNEL/L<sub>dn</sub> or less. These are standards that are used by the City of Santa Paula and County of Ventura to establish their standards, and are not considered thresholds.

#### California Department of Health Services

The California Department of Health Services, Environmental Health Division, has published recommended guidelines for noise and land use compatibility referred to as the Guidelines for Noise and Land Use Compatibility (State Guidelines).<sup>16</sup> The State Guidelines indicate that residential land uses and other noise-sensitive receptors generally should locate in areas where outdoor ambient noise levels do not exceed 65 to 70 dB(A) (CNEL/L<sub>dn</sub>). The Department of Health Services does not mandate application of this compatibility matrix to development projects; however, under Government Code § 65302(f), each jurisdiction is required to consider the State Guidelines when developing its general plan Noise Element and when determining acceptable noise levels within its community. Consistent with the California Noise Insulation Standards, the State Department of Housing and Community Development does require that new multi-family units cannot be exposed to outdoor ambient noise levels in excess of 65 dB(A) (CNEL/L<sub>dn</sub>), and, if necessary, sufficient noise insulation must be provided to ensure interior ambient levels of 45 dB(A) or less.<sup>17</sup> These are guidelines that are used by the City of Santa Paula and County of Ventura to establish their standards and are not considered thresholds.

Under the State Guidelines, an exterior noise level of 70 dB(A) CNEL is typically the dividing line between an acceptable and unacceptable exterior noise environment for all noise-sensitive uses, including residences, schools, libraries, places of worship, hospitals, day care centers, and nursing homes of conventional construction. Noise levels below 75 dB(A) CNEL are typically acceptable for office and commercial buildings, while levels up to 75 dB(A) CNEL are typically acceptable for industrial uses. In unacceptable interior noise environments, additional noise insulation features, such as extra batting or resilient channels<sup>18</sup> in exterior walls, double paned windows, air conditioners to enable occupants to keep their windows closed without compromising their comfort, solid wood doors, noise baffles on exterior vents, etc., are typically needed to provide acceptable interior noise levels. These are guidelines that are used by the City of Santa Paula and County of Ventura to establish their standards and are not considered thresholds.

---

<sup>14</sup> Source: Ventura County General Plan, Goals, Policies and Programs, December 6, 2005, pages 48 and 49.

<sup>15</sup> California Code of Regulations, Title 24, Section 3501 et seq.

<sup>16</sup> California Department of Health Services. *Guidelines for the Preparation and Content of Noise Elements of the General Plan*, 1976. These Guidelines are also published by the Governor's Office and Planning and Research in the State of California General Plan Guidelines (2003).

<sup>17</sup> This requirement is based on the U.S. Environmental Protection Agency's finding that an indoor noise level of 45 dB is necessary to protect against sleep interference. Assuming a conservative structural noise insulation of 20 dB for typical dwellings, 45 dB corresponds to an outdoor CNEL of 65 dB as minimizing sleep interference.

<sup>18</sup> A resilient channel is a pre-formed section of sheet metal approximately 0.5 inch deep by 2.5 inches wide by 12 inches long that is installed between wallboard panels and framing to reduce sound transmission through walls. By preventing the wallboard from lying against the studs, the channel inhibits the transmission of sound through the framing.

## California Department of Transportation

Streets and Highways Code § 216 requires the California Department of Transportation (Caltrans) to abate freeway traffic noise within school classrooms under certain circumstances. These circumstances include when a new freeway or modification to existing freeway occur that affect an existing school uses; this is not applicable to the East area 1 project. Classrooms, libraries, multipurpose rooms, and other spaces used for pupil personnel services of a public or private elementary or secondary schools are eligible when noise levels, or projected noise levels within produced from the freeway traffic or freeway construction exceed 52 dB(A)  $L_{eq}(h)$ .<sup>19</sup> Allowable abatement measures include, but are not limited to, installing acoustical material, replacing or eliminating windows, installing air conditioning, or constructing sound baffling structures.

### 4.6.2 THRESHOLDS OF SIGNIFICANCE

#### 4.6.2.1 CEQA Guidelines, Appendix G

Based on Appendix G of CEQA Guidelines, a significant impact related to noise would occur if the proposed project would:

- Expose people 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;
- Expose people to or generation of excessive ground-borne vibrations or ground-borne noise levels;
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- If located within an airport land use plan or, if such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise; or
- If located within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

#### 4.6.2.2 Noise Regulations

The *CEQA Guidelines* do not identify what constitutes a substantial increase in ambient noise. Moreover, the *CEQA Guidelines* do not provide an impact threshold for potential noise impacts. Consequently, the following thresholds of significance were developed for this noise analysis based solely on the applicable City and County plans and policies discussed previously. State standard and guidelines were provided under the Regulatory Setting above as a matter of information and are not considered thresholds.

### On-Site Thresholds

According to the City's Noise Element Noise Standards (Figure 4.6-5), office buildings, business commercial and professional uses are "acceptable" with exterior noise levels of up to 70 dB(A)  $L_{dn}/CNEL$ . Given this, the proposed project would result in a significant noise impact if on-site exterior locations around these types of uses would be exposed to noise levels above 70 dB(A)  $L_{dn}/CNEL$ . The Noise Guidelines identify 75 dB(A) as the "acceptable" exterior noise level threshold for industrial uses.

<sup>19</sup> California Streets and Highway Code, Title 24, Section 216.

For residential uses, the noise guidelines identify 60 dB(A)  $L_{dn}$ /CNEL as the “acceptable” exterior noise level threshold. Therefore, the project would result in a significant noise impact if a person residing within a usable area (such as a yard or patio) of the proposed residential uses would be exposed to exterior noise above 60 dB(A)  $L_{dn}$ /CNEL. In addition, as presented in the Noise Element, the maximum interior noise threshold is 45 dB(A) CNEL for noise sensitive uses.

#### Off-Site Thresholds

Off-site noise thresholds consider the City Noise Compatibility Matrix (refer to Figure 4.6-5 within this noise section of the EIR), and County General Plan community responses to changes in noise levels, and CEQA standards. Changes in a noise level of less than three dB(A) are not typically noticed by the human ear.<sup>20</sup> Some individuals who are extremely sensitive to changes in noise may notice changes from three to five dB(A).

Based on this information, the following thresholds have been established for this analysis to assess traffic related noise increases:

- An increase of three dB(A) or greater in traffic noise levels that occur from project-related activities would be significant if the resulting noise levels exceeded the City Noise Compatibility Matrix for “acceptable” exterior or interior noise levels. In addition, an increase of three dB(A) or greater in traffic noise levels that occurs from project-related activities would be significant if the resulting noise levels exceeded County exterior or interior CNEL levels.
- An increase of five dB(A) or less in traffic noise levels that occur from project-related activities would not be considered significant if the resulting noise levels remain below the exterior and interior thresholds established by the City. Increases in traffic noise greater than 5 dB(A) would be considered to be significant.

#### 4.6.2.3 Vibration Regulations

The *CEQA Guidelines* do not define the levels at which ground-borne vibration is considered “excessive.” This analysis uses the Federal Railway Administration’s vibration impact thresholds for sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences) and 83 VdB at institutional buildings.<sup>21</sup>

#### 4.6.3 METHODOLOGY RELATED TO NOISE

Analyses of the existing and future noise environments presented in this study are based on technical reports, noise monitoring, and noise prediction modeling. To characterize the existing noise environment, sound level monitoring was conducted on April 5, 6, 10, and 15, 2007 at four locations. Figure 4.6-4 depicts the four noise monitoring locations. Sound level monitoring on April 5, 6, and 10 was conducted for 24 hours using a Larson-Davis Model 720 Controller Integrating Sound Level Meter. A short-term measurement was taken using a Larson-Davis Model 820 Controller Integrating Sound Level Meter positioned 50 feet from the Fillmore & Western Railway Company railroad tracks at approximately 1:00 P.M. on April 15, 2007 while a Fillmore & Western Railway Company train passed by the project site. The Larson-Davis Model 720 and 820 Controller Integrating Sound Level Meters satisfy the American National Standards Institute standard for general environmental noise measurement

<sup>20</sup> City of Santa Paula Noise Element, 13 April 1998, page N-2.

<sup>21</sup> Federal Railroad Administration, *High-Speed Ground Transportation Noise and Vibration Impact Assessment*, October 2005, Page 7-2, Table 7-1

instrumentation<sup>22</sup>. Random incidence microphones with windscreens were used given the outdoor (i.e., free field) conditions of the monitoring. The microphones were positioned approximately 1.5 meters above ground level. Wind speeds during noise monitoring ranged from 0 to 5 miles per hour and conditions were partly cloudy or sunny. There was no construction or other abnormal noise conditions present during monitoring.

In order to characterize the ambient roadway noise environment in the project site, noise prediction modeling was conducted based on vehicular traffic volumes along nearby roadway segments. Noise levels were modeled using the Federal Highway Administration Noise Prediction Model (FHWA-RD-77-108). This model calculates the average noise level in dB(A) CNEL along a given roadway segment based on traffic volumes, vehicle mix, average speeds, roadway geometry, and site conditions. In addition, two segments along SR-126 in the vicinity of the project site were modeled.

Potential vibration impacts were determined using data from the Federal Transit Administration and Caltrans. Noise modeling procedures involved the calculation of existing and future roadway noise levels along local roadway and highway segments. This was accomplished using the Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108). This model calculates the average noise level in dB(A) CNEL along a given roadway segment based on traffic volumes, vehicle mix, average speeds, roadway geometry, and site conditions. Average vehicle noise rates (energy rates) utilized in the Federal Highway Administration Highway Noise Prediction Model have been modified to reflect average vehicle noise rates identified for the state of California by Caltrans<sup>23</sup>. Traffic volumes utilized as data inputs to the noise prediction model were calculated based on peak-hour turning movements provided by Fehr & Peers/Kaku Associates for the 35 local intersections studied in the traffic impact analysis prepared for the project.<sup>24</sup> The total of A.M. and P.M. peak-hour turning movements at the intersections representing the termini of a given roadway segment which would place vehicles on that segment were multiplied by a factor of 6 to estimate the Average Daily Trips (ADTs) for that segment. A factor of six was used based on a comparison of existing condition turning movements provided by the project traffic engineer with the ADTs contained in the Circulation Element of the City of Santa Paula General Plan. The 24-hour traffic distribution was based on FHWA model default parameters and differs from those contained within the City of Santa Paula General Plan. If the distribution contained within the General Plan were used, actual noise levels from those included within this study would be reduced by approximately 0.3 dB(A). Consequently, the use of the default provides a worst-case scenario.

Trains traveling along the Fillmore & Western Railway Company railroad tracks represent an intermittent and infrequent noise source that occurs outside of peak roadway traffic periods. The Fillmore & Western Railway Company operated train noise is a regular noise source. The railway operates trains throughout the year on both a regular and special train schedule. For the most part, the regular train runs on weekends with two round trips on both Saturday and Sunday, and a weekday day trains on some evenings. Special trains run during such times as the Christmas holidays or other holiday or special events. This analysis assumes as worst-case of an average of three trains (6 pass-bys) per day and average speed of 10 miles per hour in along the southern boundary of the proposed project. In order to determine the overall on-site noise levels, train noise levels were combined with future traffic noise levels from SR-126 and Telegraph Road.

---

<sup>22</sup> American National Standards Institute of the Acoustical Society of America, American National Standard Specification for Sound Level Meters, January-1993

<sup>23</sup> California Department of Transportation, Use of California Vehicle Noise References Energy Mean Emission Levels in STAMINA 2.0 FHWA Highway Traffic Noise Prediction, September 1995.

<sup>24</sup> Fehr & Peers/Kaku Associates. Traffic Impact Analysis for the Santa Paula East Area 1 Specific Plan. July 2007.

#### 4.6.4 POTENTIAL IMPACTS<sup>25</sup>

##### 4.6.4.1 Construction Noise Impacts

###### Noise

Steady-state and episodic noise would be generated on-site by equipment used during project construction. Numerous agencies have compiled data regarding the noise-generating characteristics of specific types of construction equipment<sup>26</sup>. This data is presented in Figure 4.6-6 (Noise Levels of Typical Construction Equipment). In general, the noisiest phase of construction is site preparation, which usually involves earth-moving, compaction of soils, and the removal of excess materials. High noise levels created by this activity would be associated with the operation of heavy duty trucks, scrapers, graders, backhoes, and front-end loaders used to create the development pad and roadbed. When construction equipment is operating, noise levels can range from 73 to 95 dB(A) at a distance of 50 feet from individual pieces of equipment.

Following site preparation, activities associated with project development include utility infrastructure installation, pouring foundations, interior construction, and site cleanup. Primary noise sources associated with this stage of construction include hammering, diesel generators, compressors, and heavy duty truck traffic. Noise levels are typically in the 60 to 80 dB(A) range at a distance of 50 feet. Introduction of landscaping is generally the final activity, which involves the use of trucks, landscape rollers, and compactors, with noise levels in the 65 to 75 dB(A) range.

The maximum noise level generated by construction equipment would be 95 dB(A) associated with a tractor used for earthmoving.

###### *On-site Sensitive Receptors*

###### Exterior Noise

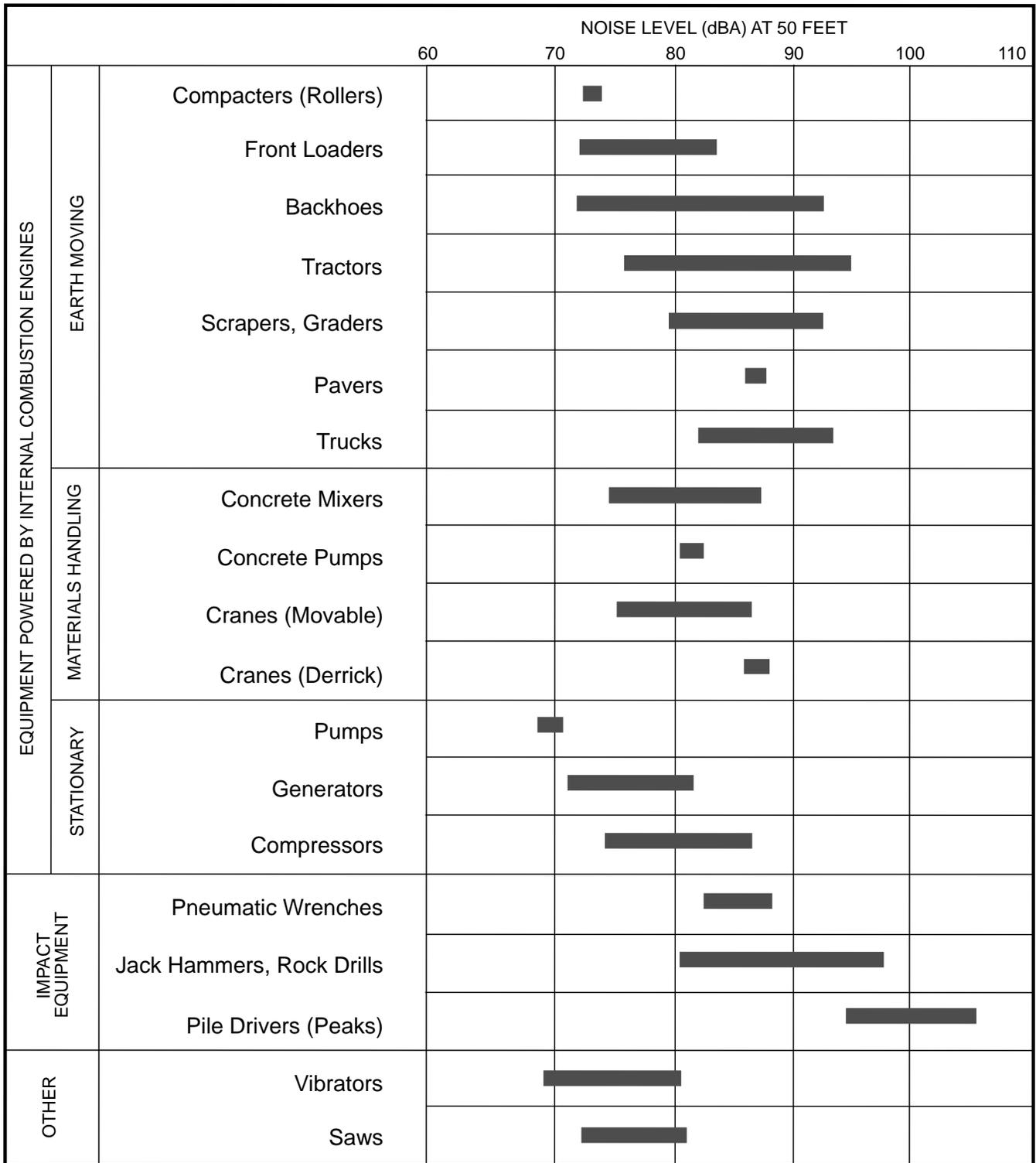
Not all of the land uses proposed within the Specific Plan would be built concurrently within the project site. Construction is contemplated to occur in four phases over approximately ten years. Consequently, sensitive receptors could be located within close proximity of construction activities and include occupied residential units, schools, and assisted living facilities within completed portions of the project site.<sup>27</sup> As development within the project site occurs over time, there is a potential for completed and occupied homes and other noise-sensitive uses within the project site to be affected by noise from construction within the project site. Except for construction activities occurring between 8:00 A.M. and 6:00 P.M., SPMC § 93.21 establishes an exterior noise standard at residential uses of 65 dB(A) from 7:00 A.M. through 10:00 P.M.

---

<sup>25</sup> Note: There are unincorporated County "islands" to the west (across Santa Paula Creek) and south (Fillmore & Western Railway Company right-of-way) (see Section 4.1 (Land Use), Figure 4.1-3 of this EIR) which are subject to County of Ventura land use controls, including construction activities and associated noise levels. As such, the analysis below evaluates impacts utilizing both the City of Santa Paula and Ventura County noise regulations for these areas where appropriate. By example, although construction noise generated on-site may be in compliance with City of Santa Paula Municipal Code interior and/or exterior standards, these levels and their associated impacts to off-site areas may exceed County of Ventura standards for adjacent unincorporated areas described above.

<sup>26</sup> Federal Highway Administration, Highway Construction Noise Handbook, August 2006, Appendix A..

<sup>27</sup> Note: See Section 3.0 (Project Description) of this EIR for a discussion of the proposed phasing plan.



Note: Based on limited available data samples.

Source: United States Environmental Protection Agency, 1971, "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances," NTID 300-1.

Figure 4.6-6  
Noise Levels of Typical Construction Equipment

Noise generated by on-site construction activities complying with the SPMC (a temporary noise permit can be obtained pursuant to SPMC §93.06) would be less than significant.

#### Interior Noise

Sensitive receptors could be located within close proximity of construction activities and include occupied residential units, schools, and assisted living facilities within completed portions of the project site.<sup>28</sup> As development within the project site occurs over time, there is a potential for completed and occupied homes and other noise-sensitive uses within the project site to be affected by noise from construction within the project site. The City of Santa Paula Noise Element sets an interior noise standard at residential uses of 45 dB(A)<sup>29</sup>. Although the City considers construction noise temporary and intermittent, future development within the project site would be required to comply with SPMC §93.21 which generally requires construction noise to be restricted to the hours of 8:00 A.M. to 6:00 P.M. Monday through Friday (though a temporary noise permit can be obtained pursuant to SPMC §93.06). Therefore, noise generated by on-site construction activities would be less than significant.

#### *Off-site Sensitive Receptors*

#### Exterior Noise

Existing sensitive receptors include single-family residences across Santa Paula Creek and to the south between Telegraph Road and SR-126. Both residential locations are approximately 250 feet from the project site at the closest point. Based on an attenuation rate of 7.5 dB(A) per doubling distance for noise generated by a point source at an acoustically “soft” site, the maximum noise level at the single-family residences to west across Santa Paula Creek and to the south between Telegraph Road and SR-126 would be approximately 78 dB(A). Except for construction activities occurring between 8:00 A.M. and 6:00 P.M., SPMC § 93.21 establishes an exterior noise standard at residential uses of 65 dB(A) from 7:00 A.M. through 10:00 P.M. Noise generated by on-site construction activities complying with the SPMC (a temporary noise permit can be obtained pursuant to SPMC §93.06) would be less than significant.

Utilizing County of Ventura thresholds, sensitive receptors located within the unincorporated areas west (across Santa Paula Creek) and south (Fillmore & Western Railway Company right-of-way) the approximately 78 dB(A) exterior maximum would exceed Ventura County noise standards. Therefore, impacts would be considered to be significant.

#### Interior Noise

The City of Santa Paula Noise Element sets an interior noise standard at residential uses of 45 dB(A) Noise generated by on-site construction activities complying with the SPMC (a temporary noise permit can be obtained pursuant to SPMC §93.06) would be less than significant.

Utilizing County of Ventura thresholds, sensitive receptors located within the unincorporated areas west (across Santa Paula Creek) and south (Fillmore & Western Railway Company right-of-way) could experience noise level of approximately 78 dB(A). Assuming a 25 dB(A) exterior to interior reduction which is typical for standard construction would result in a interior noise level of approximately 53 dB(A) and be above County interior threshold levels. Therefore, impacts would be considered to be significant.

---

28 Note: See Section 3.0 (Project Description) of this EIR for a discussion of the proposed phasing plan.

29 City of Santa Paula Noise Element, 13 April 1998, page N-19..

### Vibration

Ground vibrations from construction activities very rarely reach a level that can damage structures, but they can achieve an audible range and be felt in buildings proximal to the site. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Ground vibrations from construction activities rarely reach levels that can damage structures, but they can achieve the audible and perceptible ranges in buildings close to the construction site. Table 4.6-4 lists vibration source levels for construction equipment.

**TABLE 4.6-4  
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT**

EQUIPMENT	APPROXIMATE VDB			
	25 FEET	50 FEET	75 FEET	100 FEET
Large Bulldozer	87	81	77	75
Loaded trucks	86	80	76	74
Jackhammer	79	73	69	67
Small Bulldozer	58	52	48	46

Source: Federal Railroad Administration, *High-Speed Ground Transportation Noise and Vibration Impact Assessment*, December 1998, Page 10-10, Table 10-4.

### On-site Sensitive Receptors

#### Exterior Vibration

As noted previously, future sensitive receptors include occupied residential units, schools, and assisted living facilities within completed portions of the project site. In addition, the proposed project would be implemented in consecutive phases. While many of the existing buildings within the project site would remain, some demolition activities are proposed. In the event that completed and occupied residential units, schools and assisted living facilities are adjacent to an area under construction and demolition is required, significant vibration impacts could occur. Therefore, impacts associated with vibration during construction are adverse and significant.

### Off-site Sensitive Receptors

#### Exterior Vibration

Existing off-site sensitive receptors include single-family residences to the west across Santa Paula Creek and to the south between Telegraph Road and SR-126. Both residential uses are approximately 250 feet from the project site at the closest point. Construction activities in the area of the residential area to the west and south would be in excess of 100 feet of the project site and would not exceed the 80 VdB threshold for residences and buildings. In addition, if annexed to the City, the project site would be subject to the SPMC which restricts construction activities and their associated noise levels. Construction activities would be limited to daytime hours between 8:00 A.M. and 6:00 P.M. Therefore, ground-borne vibration impacts to residences (within the City of Santa Paula) to the west and south of the project site during project construction would be less than significant.

#### 4.6.4.2 Operations Noise Impacts

##### Noise

##### *Roadway Noise*

##### Off- and On-site Sensitive Receptors

Exterior Noise. Vehicular noise could potentially affect sensitive receptors within the project site, as well as sensitive receptors located along the studied roadway system. Noise generated by traffic volumes with and without the project in the year 2020 along studied roadway segments was calculated as shown in Table 4.6-5. Model results are shown in Table 4.6-5. As shown, noise increases resulting from the project range from 0.1 to 3.7 dB(A) CNEL. Nine roadway segments would generate less roadway noise after the project was constructed because of new traffic distribution patterns. These include street improvements extending Santa Paula Street east over Santa Paula Creek to the extension of Hallock Drive. Future combined roadway noise associated with SR-126 and Telegraph Road was calculated based upon the proposed project and a “no project” alternative. Based on an attenuation rate of 4.5 dB(A) per doubling distance for a line source and an acoustically soft site, the noise level resulting from combined roadway noise generated along SR-126 and Telegraph Road at 75 feet from the centerline of Telegraph Road is estimated as follows: 71.2 dB(A) without the project and 71.7 dB(A) with implementation of the proposed project.<sup>30</sup> Land uses proposed within this area would include light industrial and as such noise levels would be within the acceptable level according to the City’s Noise Compatibility Matrix.

As shown in Table 4.6-5, traffic volumes on Harvard Boulevard between Steckel Drive and Palm Avenue, would generate a noise level of 67.2 dB(A) CNEL. As the modeled noise level along this segment under future without project conditions is 64.9 dB(A) CNEL, the proposed project would result in an increase in the ambient noise level along this roadway segment of 2.3 dB(A). As previously discussed, noise level increases up to 3 dB(A) are inaudible to the human ear. Therefore, an increase of 2.3 dB(A) along Harvard Boulevard between Steckel Drive and Palm Avenue would not be perceptible and would not be considered a significant adverse impact.

Traffic volumes on Santa Paula Street between 12th Street and 10th Street would generate a noise level of 61.1 dB(A) CNEL. As the modeled noise level along this segment under future without project conditions is 57.9 dB(A) CNEL, the proposed project would result in an increase in the ambient noise level along this roadway segment of 3.2 dB(A). As previously discussed, an increase of three dB(A) or greater in traffic noise level that occurs from project-related activities would be considered significant if the resulting noise levels would exceed the City Noise Compatibility Matrix for “acceptable” exterior or interior noise levels to be exceeded. This noise level increase would exceed the City Noise Compatibility Matrix for “acceptable” exterior noise levels and would be considered to be a significant impact.

---

<sup>30</sup> Noise level estimates are from Table 4.6-5. Reference distance from SR-126 is 215 feet from centerline and for Telegraph Road is 75 feet from centerline.

Two studied roadway segments, Telegraph Road between Harvard Boulevard (which includes the County island areas to south and west of the project site) and Hallock Drive, and South Mountain Road between Harvard Boulevard and Lemon Road, are within Ventura County jurisdiction. The County noise standard of the General Plan would apply to these two roadway segments. As shown in Table 4.6-5, noise level increases along these roadway segments due to Specific Plan implementation would be 0.4 and 0.5 dB(A) CNEL, respectively. Neither of these noise increases would expose sensitive receptors to a three dB(A) noise increase over ambient exterior conditions. Therefore, impacts along these two roadway segments would be less than significant.

Implementation of the proposed project would thus result in a significant impact related to noise generated by roadway traffic.

Interior Noise. As previously indicated, noise increases due to Specific Plan implementation range from 0.1 to 3.7 dB(A) CNEL. These increases would also be experienced within interior locations along roadway identified in Table 4.6-5. Of the 46 intersections evaluated, only Santa Paula Street between 12th Street and 10th Street would expose sensitive receptors to a three dB(A) noise increase over ambient City or County interior conditions. Therefore, impacts along two roadway segments would be significant.

Along Santa Paula Street between 12th Street and 10th Street exterior noise levels of 61.1 dB(A) CNEL would be experienced due to an increase in the ambient noise level along this roadway segment of 3.2 dB(A). Nonetheless, assuming a 25 dB(A) reduction in exterior to interior noise levels resulting from standard building construction, interior noise levels would be below threshold level of 45 dB(A) resulting in less than significant impact.

**TABLE 4.6-5  
FUTURE WITH AND WITHOUT PROJECT MODELED NOISE LEVELS (dB(A) CNEL) AT 75 FEET FROM  
ROADWAY CENTERLINE**

ROADWAY SEGMENT	2020 WITHOUT PROJECT	2020 WITH PROJECT	CHANGE DUE TO PROJECT	SIGNIFICANT IMPACT?
1. Hallock Dr.: SR-126 and Telegraph Rd.	61.0	64.7	3.7	NO
2. Telegraph Rd.: Harvard Blvd. and Hallock Dr.	63.2	63.6	0.4	NO
3. Harvard Blvd.: 12 <sup>th</sup> St. and Main St.	58.4	60.6	2.2	NO
4. S. Mountain Rd.: Harvard Blvd. and Lemon Rd.	58.5	59.0	0.5	NO
5. Main St.: 12 <sup>th</sup> St. and Harvard Blvd.	62.3	61.4	(0.9)	NO
6. 12 <sup>th</sup> St.: Harvard Blvd. and Main St.	59.6	59.6	(0.0)	NO
7. 12 <sup>th</sup> St.: Main St. and Santa Barbara St.	61.1	60.5	(0.6)	NO
8. 12 <sup>th</sup> St.: Santa Barbara St. and Santa Paula St.	61.0	60.5	(0.5)	NO
<b>9. Santa Paula St.: 12<sup>th</sup> St. and 10<sup>th</sup> St.</b>	<b>57.9</b>	<b>61.1</b>	<b>3.2</b>	<b>YES</b>
10. Ojai Rd.: Santa Paula St. and Saticoy St.	62.3	61.3	(1.0)	NO
11. Ojai Rd.: Saticoy St. and Orchard St.	64.1	64.4	0.3	NO
12. Ojai Rd.: Orchard St. and Richmond Rd.	64.5	64.7	0.2	NO
13. 10 <sup>th</sup> St.: Santa Paula St. and Santa Barbara St.	62.7	62.1	(0.6)	NO
14. Santa Barbara St.: 10 <sup>th</sup> St. and 12 <sup>th</sup> St.	56.8	56.0	(0.8)	NO
15. 10 <sup>th</sup> St.: Santa Barbara St. and Main St.	62.3	62.1	(0.2)	NO
16. Main St.: 10 <sup>th</sup> St. and 12 <sup>th</sup> St.	59.3	59.1	(0.2)	NO
17. 10 <sup>th</sup> St.: Main St. and Harvard Blvd.	62.1	62.3	0.2	NO
18. 10 <sup>th</sup> St.: Harvard Blvd. and SR-126	63.7	63.8	0.1	NO
19. 10 <sup>th</sup> St.: SR-126 On/Off Ramps North and South	60.7	60.8	0.1	NO
20. Harvard Blvd.: 10 <sup>th</sup> St. and 12 <sup>th</sup> St.	62.7	63.5	0.8	NO
21. Harvard Blvd.: 8 <sup>th</sup> St. and 10 <sup>th</sup> St.	63.5	64.2	0.7	NO

**TABLE 4.6-5  
FUTURE WITH AND WITHOUT PROJECT MODELED NOISE LEVELS (dB(A) CNEL) AT 75 FEET FROM  
ROADWAY CENTERLINE**

ROADWAY SEGMENT	2020 WITHOUT PROJECT	2020 WITH PROJECT	CHANGE DUE TO PROJECT	SIGNIFICANT IMPACT?
22. 8 <sup>th</sup> St.: Harvard Blvd. and Main St.	60.3	60.6	0.3	NO
23. Main St.: 8 <sup>th</sup> St. and 10 <sup>th</sup> St.	59.5	59.6	0.1	NO
24. 8 <sup>th</sup> St.: Main St. and Santa Paula St.	60.7	61.3	0.6	NO
25. Santa Paula St.: 8 <sup>th</sup> St. and 10 <sup>th</sup> St.	60.8	62.3	1.5	NO
26. Santa Paula St.: Palm Ave. and 6 <sup>th</sup> St.	61.2	61.9	0.7	NO
27. Harvard Blvd.: Palm Ave. and 8 <sup>th</sup> St.	64.5	64.9	0.4	NO
28. Main St.: Palm Ave. and 8 <sup>th</sup> St.	60.0	60.4	0.4	NO
29. Palm Ave.: Santa Paula St. and Santa Barbara St.	60.1	60.4	0.3	NO
30. Palm Ave.: Santa Barbara St. and Main St.	61.2	61.4	0.2	NO
31. Palm Ave.: Main St. and Harvard Blvd.	62.4	62.4	0.0	NO
32. Palm Ave.: Harvard Blvd. and SR-126	62.9	63.0	0.1	NO
33. Palm Ave.: SR-126 On/Off Ramps North and South	61.0	61.1	0.1	NO
34. Harvard Blvd.: Steckel Dr. and Palm Ave.	64.9	67.2	2.3	NO
35. Harvard Blvd.: Peck Rd. and Steckel Dr.	64.1	64.2	0.1	NO
36. Steckel Dr.: Harvard Blvd. and Main St.	58.6	58.6	0.0	NO
37. Main St.: Steckel Dr. and Palm Ave.	60.0	60.3	0.3	NO
38. Steckel Dr.: Main St. and Santa Paula St.	57.3	57.3	0.0	NO
39. Santa Paula St.: Steckel Dr. and Palm Ave.	61.6	61.9	0.3	NO
40. Santa Paula St.: Peck Rd. and Steckel Dr.	60.8	61.1	0.3	NO
41. Peck Rd.: Telegraph Rd. and Santa Paula St.	63.0	63.1	0.1	NO
42. Peck Rd.: Faulkner Rd. and Telegraph Rd.	62.8	62.9	0.1	NO
43. Faulkner Rd.: SR-126 and Peck Rd.	62.7	62.0	(0.7)	NO
44. Peck Rd.: Faulkner Rd. and SR-126	61.0	61.2	0.2	NO
45. SR-126 east of Hallock Dr.	77.3	77.9	0.6	NO
46. SR-126 between 10 <sup>th</sup> St. and Hallock Dr.	77.3	77.9	0.6	NO

Source: Impact Sciences, 2007.

Airport Noise

*Off- and On-site Sensitive Receptors*

Exterior Noise. As previously noted, the Santa Paula Airport is located on a 38-acre site south of SR-126, approximately one mile southwest of the project site. According to the Noise Element of the Santa Paula General Plan, aircraft noise is generally not a problem in the City because the general aircraft travel pattern is south of the City, over the Santa Clara River, and the required approach and departure altitude is at least 1,500 feet.<sup>31</sup> Figure 4.6-3 shows noise contours from SR-126, SR-150, and the Santa Paula Airport. As shown, the 60 dB(A) contour extends approximately 1,000 feet into the southern portion of the project site. Open space is proposed within the majority of this portion of the project site.

Residential, commercial, and neighborhood center uses are proposed within the remainder of the 60 dB(A) noise contour and project site overlap. According to City of Santa Paula thresholds, an exterior noise level of 60 dB(A) would be acceptable for sensitive receptors and, therefore, any uses proposed

<sup>31</sup> City of Santa Paula. "Noise Element." *City of Santa Paula General Plan*. 13 April 1998. p. N-7.

within that portion of the project site would not be exposed to significant noise levels. Impacts would be less than significant.

Thus, as discussed above, while the proposed project is located within one mile of the Santa Paula Airport, it would not expose people residing or working in the project site to excessive noise due to the aircraft travel pattern. Therefore, implementation of the proposed project would not result in significant impacts related to noise generated by the nearby public airport.

Interior Noise. As previously indicated, the 60 dB(A) contour extends approximately 1,000 feet into the southern portion of the project site. Residential, commercial, and neighborhood center uses are proposed within the 60 dB(A) noise contour and project site overlap. According to City of Santa Paula thresholds, interior noise level of 45 dB(A) would be acceptable for sensitive receptors. Assuming a standard construction reduction of approximately 25 dB(A), overall noise level on the project site as a result of aircraft noise would be below 45 dB(A), and, therefore, any uses proposed within that portion of the project site would not be exposed to significant noise levels. Impacts would be less than significant.

### Railroad Noise

#### *Off- and On-site Sensitive Receptors*

Exterior Noise. As previously noted, trains traveling on the Fillmore & Western Railway Company right-of-way represents an intermittent noise source. Currently, the Fillmore & Western Railway Company operates tourist-oriented trains between 12:00 P.M. and 3:00 P.M. on Saturdays and Sundays. The tracks are also used by one freight train, which passes by the Specific Plan area twice on Mondays, Wednesdays, and Fridays between the hours of 8:00 A.M. and 12:00 P.M. As shown in Figure 3-4 (East Area 1 Illustrative Plan) (see Section 3.0 (Project Description) of this EIR), light industrial/mixed use and open space land uses are proposed along the southern Specific Plan area boundary. The Santa Paula Branch Rail Line Corridor is currently classified as Federal Railroad Administration Track Class 1, the lowest track classification. Class 1 limits freight to a maximum speed of 10 mph, and passenger trains to 15 mph.<sup>32</sup> Because the Fillmore & Western Company has an at-grade crossing at Highway 126, and is entering and exiting the City of Santa Paula near project site, trains speed of less than 10 mph<sup>33</sup>. Assuming an average of three trains (6 pass-bys) per day and speed of 10 miles per hour along the southern boundary of the Specific Plan, predicted noise levels at 90 feet from the railway centerline would be 63 dB(A) CNEL.<sup>34</sup> When combined with traffic noise, overall exterior noise levels would be approximately 72.2 dB(A) CNEL at 75 feet from the Telegraph Road centerline. Due to its proximity to the Fillmore & Western Railway Company railroad track, uses proposed within southern portion of the Specific Plan are primarily non-noise-sensitive and include light industrial, office, limited retail, open space and roads. However, limited residential uses in the form of work/live units on upper floor residences over commercial spaces are proposed. Work/live and residential units would be sensitive receptors to railroad noise and an adverse significant impact could result depending on building orientation and design.

Interior Noise. As previously indicated, limited residential uses in the form of work/live units on upper floor residences over commercial spaces are proposed. Work/live and residential units would be sensitive receptors to railroad noise and there is the potential for interior noise levels to be above 45 dB(A) depending on building orientation and design. Consequently, interior noise levels could be significant. Applying a 25 dB(A) interior to exterior reduction which is typical of standard construction would result

<sup>32</sup> Ventura County Transportation Commission, Draft Final Report Santa Pula Branch Line Rail Study, March 2007.

<sup>33</sup> Telephone conversation with Teresa Wilkerson, Owner, Fillmore & Western Railway Company, 1 November 2007.

<sup>34</sup> Advanced Engineering Acoustics, July 2006.

in an interior noise level of approximately 47.2 dB(A) and would be above the City's General Plan noise threshold of 45 dB(A). Therefore, impacts to work/live or residential units would be significant.

### Vibration

#### *Off- and On-site Sensitive Receptors*

Exterior Vibration. As previously noted, operating trains are a source of ground-borne vibration. The Fillmore & Western Railway Company railroad tracks runs adjacent to the southern boundary of the project site. Currently, the Fillmore & Western Railway Company operates tourist-oriented trains between 12:00 P.M. and 3:00 P.M. on Saturdays and Sundays. The tracks are also used by one freight train, which passes by the project site twice on Mondays, Wednesdays, and Fridays between the hours of 8:00 A.M. and 12:00 P.M. As shown in Figure 3-4 (East Area 1 Illustrative Plan) (see Section 3.0 (Project Description) of this EIR), light industrial/mixed use and open space land uses are proposed along the southern Specific Plan area boundary. Due to its proximity to the Fillmore & Western Railway Company railroad track, uses proposed within southern portion of the Specific Plan are primarily non-noise-sensitive and include light industrial, office, limited retail, open space and roads. However, limited residential uses in the form of work/live units on upper floor residences over commercial spaces are proposed. The proposed work/live units would be a sensitive receptor to ground-borne vibration.

According to the 2002 Caltrans Transportation Related Earthborne Vibrations study, train-generated vibration passes below the threshold of perception or 65 VdB at a distance of 90 meters, or 295 feet, from train tracks.<sup>35</sup> The Caltrans study identifies the threshold of annoyance or approximately 80 VdB as 20 meters, or 66 feet, from train tracks, given that vibration is constant. In this case, the vibration from the railroad track would not be constant (up to 6 trains trips per day), would be approximately 75 feet from the track, and below 80 VdB resulting in less than significant impacts.

#### 4.6.5 MITIGATION MEASURES

##### 4.6.5.1 Mitigation Measures for Short Term Construction Noise

The following mitigation measures are proposed to minimize construction noise impacts. Even though construction of the proposed project is not expected to result in significant short-term noise impacts within the City, these same mitigation measures must be applied to further reduce noise impacts to the extent feasible:

- N-1 Stationary construction equipment, such as pumps, generators, or compressors, must be placed as far from noise sensitive uses as feasible during all phases of project construction.
- N-2 All construction equipment must be equipped with appropriate mufflers in good working condition.
- N-3 Before any site activity, the contractor will be required to submit a material haul route plan to the City of Santa Paula and Ventura County for review and approval. The contractor must ensure that the approved haul routes are used for all materials hauling, to minimize exposure of sensitive receivers to potential adverse noise levels from hauling operations.

<sup>35</sup> California Department of Transportation, Division of Environmental Analysis. *Transportation Related Earthborne Vibrations*. 20 February 2002. p. 17.

The following mitigation measures are proposed to minimize vibration impacts during construction:

- N-4 Notification must be provided to all occupied residences within 200 feet of an area where construction activities are anticipated to result in ground-borne vibration of more than 80 VdB at least 10 days in advance of such activities.
- N-5 During all site preparation, grading and construction, the construction contractor must ensure that all stockpiling and vehicle staging areas are located away from existing residences to the extent feasible.

#### 4.6.5.2 Mitigation Measures for Operations Noise

The following measures are proposed to minimize noise impacts generated during project operation:

- N-6 Where feasible and consistent with City standards, any paving or repaving of Santa Paula Street between 12th Street and 10th Street that must be conducted in conjunction with implementation of the proposed project should utilize asphalt rubber paving material consisting of 20 percent or more recycled rubber and 80 percent paving grade asphalt.
- N-7 Where feasible and consistent with City standards, speed limits on arterials experiencing significant noise impacts such as Santa Paula Street between 12th Street and 10th Street should be reduced. Each 5 mile per hour reduction in speed limits can decrease the CNEL level by about 1 dB(A)
- N-8 Noise sensitive work/live and residential units proposed within Specific Plan Planning Area E must be designed so that interior noise levels attributable to exterior sources exceeding 60 dB(A) CNEL do not exceed City interior noise standard (45 dB(A) CNEL). An acoustical analysis of the effectiveness of noise insulation of proposed construction must be required and documented during permit review, showing that the building materials and construction specifications are adequate to meet the interior noise standard (45 dB(A) CNEL). Examples of building materials and construction specifications that may be used to meet the interior noise standard include the following:
- Exterior livable space, such as balconies, must be oriented northward;
  - South-facing windows and sliding glass doors must be double-paned, mounted in frames with low rates of air filtration (0.5 cubic foot per minute or less, per American National Standard Institute specifications) and a sound transmission coefficient rating of 30 or greater;
  - Solid-core exterior doors must be constructed with perimeter weather stripping and threshold seals; and
  - South-facing roof or attic vents must be baffled.
- N-9 Written disclosure of maximum exterior and interior noise levels expected at work/live and residential units and at light industrial, office, and retail uses within Planning Area E must be provided to those purchasing or leasing such uses.
- N-10 Work/live and residential units, light industrial, office, and retail uses within Planning Area E must be located a minimum of 66 feet from the railroad tracks.

#### 4.6.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

##### 4.6.6.1 Level of Significance of Construction Noise Impacts After Mitigation

Implementation of mitigation measures N-1 through N-5 would reduce noise and vibration related impacts generated during construction to below a level of significance.

##### 4.6.6.2 Level of Significance of Operations Noise After Mitigation

Implementation of mitigation measures N-6 through N-10 would reduce noise related impacts generated during operation to below a level of significance.