

**Table 1**  
**East Area 1 Specific Plan Proposed Land Use Summary**

Planning Area	Land Use	Acreage	Light Industrial SF	Commercial SF	Civic/ Institutional SF	Dwelling Units
A	<b>Santa Paula Creek Neighborhood</b>					
	Residential	33.1				326
	Agricultural Preserve	14.3				
	Open Space: Park	5.1				
	Open Space: Roads, Medians	21.4				
	<b>Subtotal</b>	<b>73.9</b>				<b>326</b>
B	<b>Foothill Neighborhood</b>					
	Residential	66.4				359
	Open Space: Agricultural Preserve	79.4				
	Agricultural Preserve	40.7				
	Open Space: Parks, Greenways	11.4				
	Open Space: Roads, Medians	26.0				
	<b>Subtotal</b>	<b>223.9</b>				<b>359</b>
C	<b>Santa Paula Creek Civic District</b>					
	Civic: School	8.3			110,400	
	Civic: Shared Facilities	5.6			65,000	
	Civic: Community College	11.6			165,000	
	Open Space: Shared Athletic Fields	23.2				
	Open Space: Parks, Greenways	12.0				
	Open Space: Roads, Medians	13.1				
	<b>Subtotal</b>	<b>73.8</b>			<b>340,400</b>	
D	<b>Haun Creek Neighborhood</b>					
	Residential	28.0				745
	Commercial: Assisted Living	3.0		75,000		
	Commercial: Office/Retail	10.0		150,000		
	Civic: School	10.8			35,400	
	Open Space: Parks/Greenways	37.3				
	Open Space: Roads/Medians	21.0				
	<b>Subtotal</b>	<b>110.1</b>		<b>225,000</b>	<b>35,400</b>	<b>745</b>
E	<b>East Santa Paula Railroad District</b>					
	Work/Live	7.3				70
	Work: Light Industrial/Employment	7.3	150,000			
	Commercial: Office/Retail	2.4		60,000		
	Open Space: Roads, Medians	2.4				
	<b>Subtotal</b>	<b>19.4</b>	<b>150,000</b>	<b>60,000</b>		<b>70</b>
<b>Total for East Area 1 Specific Plan Area</b>		<b>501.1</b>	<b>150,000</b>	<b>285,000</b>	<b>375,800</b>	<b>1500</b>

Source: HDR Town Planning, East Area 1 Specific Plan, October 2007.

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 3, Common Noise Levels**.

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>4</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. 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>5</sup> Man-made or natural barriers can also attenuate sound levels, as illustrated in **Figure 4, Noise Attenuation by Barriers**. Solid walls and berms may reduce noise levels by 5 to 10 dB(A).<sup>6</sup>

The minimum attenuation of exterior to interior noise provided by typical structures in California is provided in **Table 2**.

**Table 2**  
**Outside to Inside Noise Attenuation (dB(A))**

<b>Building Type</b>	<b>Open Windows</b>	<b>Closed Windows<sup>1</sup></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

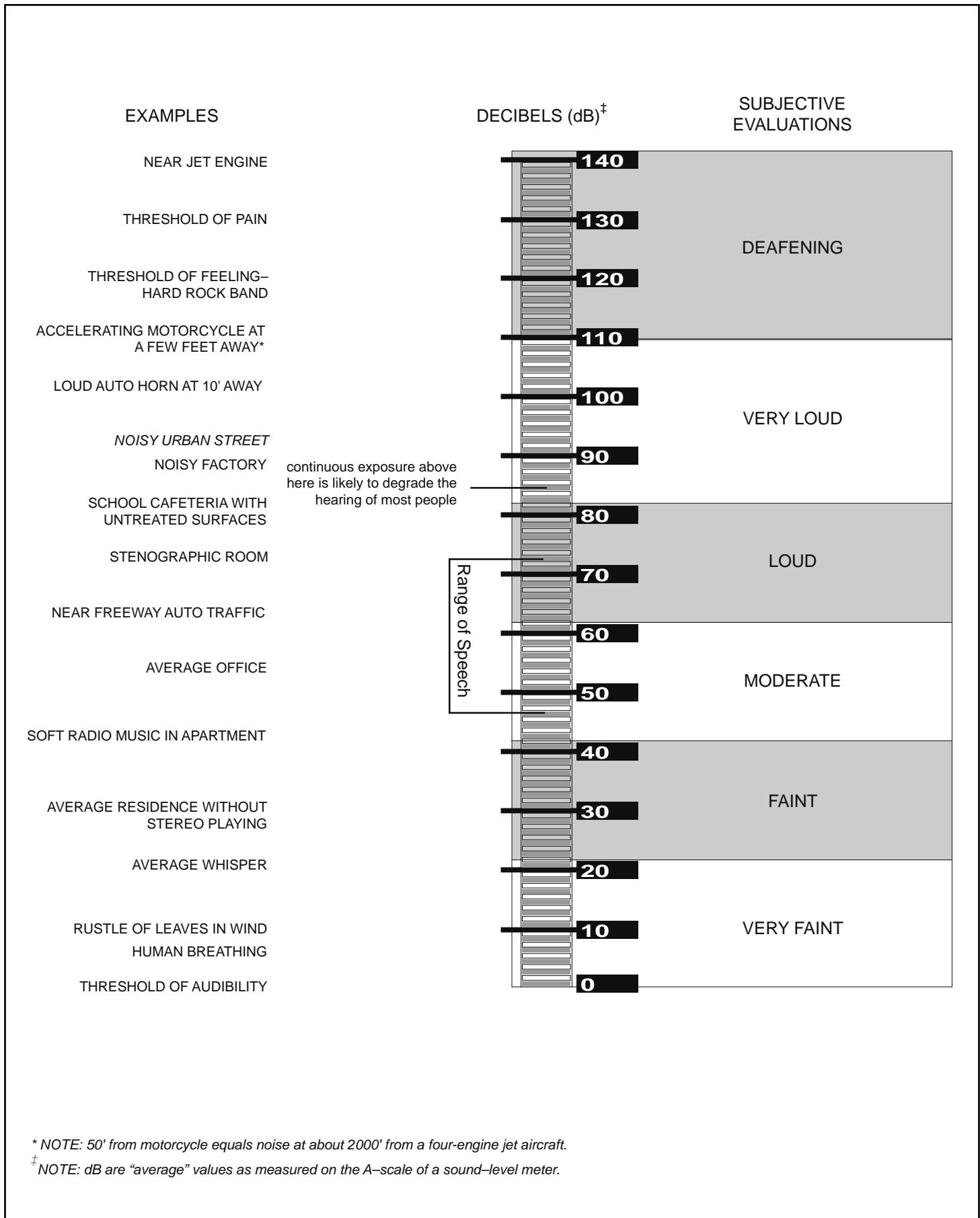
Source: *Transportation Research Board, National Research Council, Highway Noise: A Design Guide for Highway Engineers, National Cooperative Highway Research Program Report 117.*

<sup>1</sup> As shown, structures with closed windows can attenuate exterior noise by a minimum of 25 to 30 dB(A).

<sup>4</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>5</sup> Ibid.

<sup>6</sup> Ibid, p. 18.



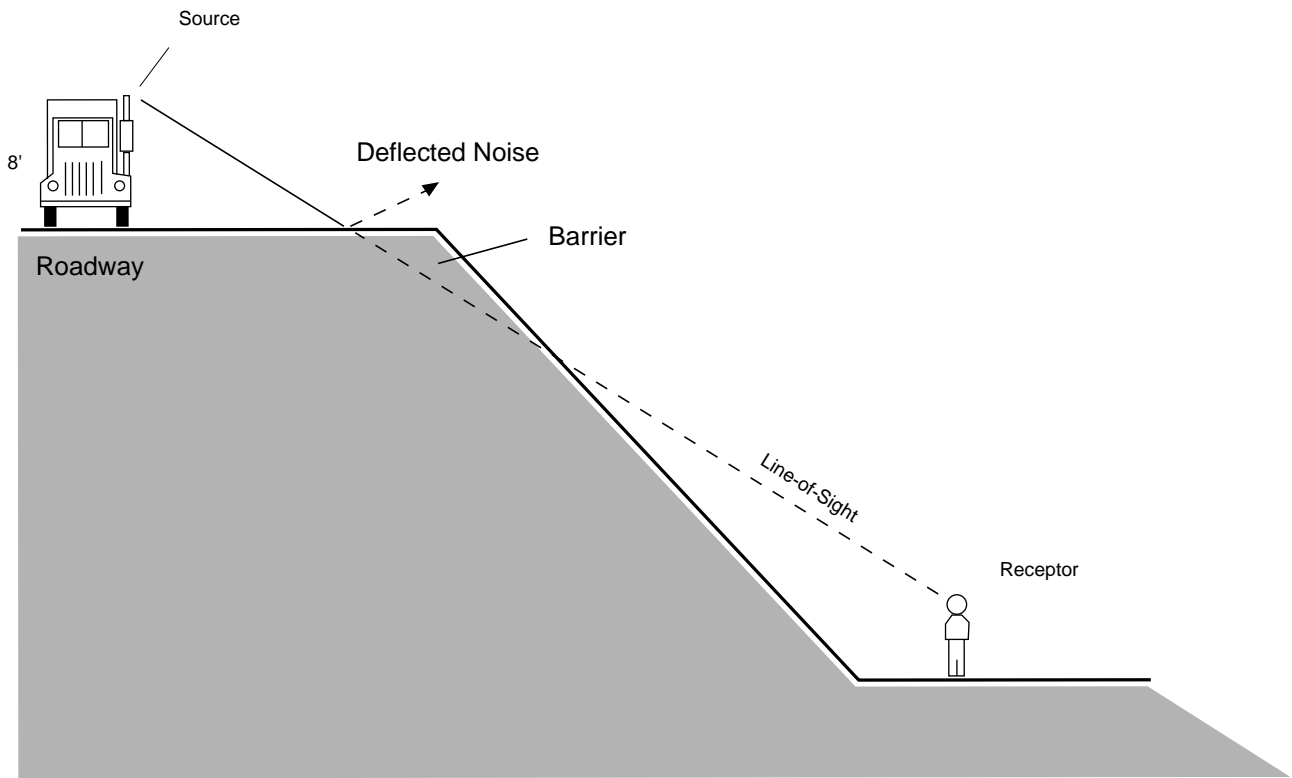
\* NOTE: 50' from motorcycle equals noise at about 2000' from a four-engine jet aircraft.

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

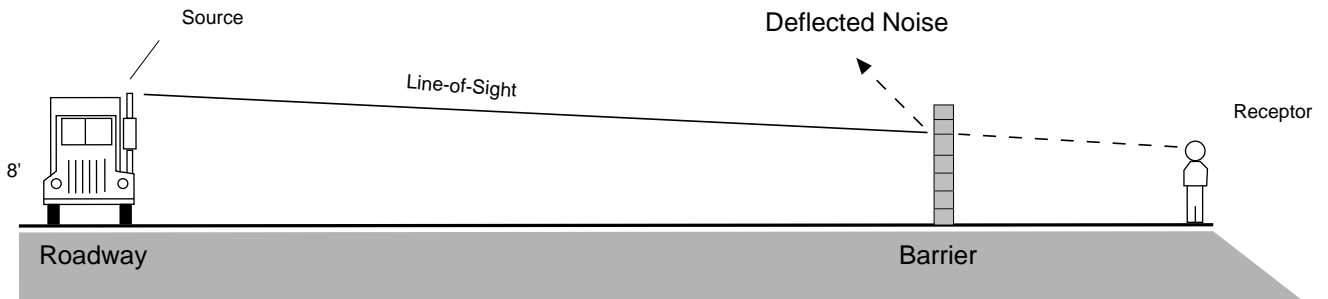
SOURCE: Impact Sciences, Inc. – March 2007

FIGURE 3

# Common Noise Levels



"Barrier Effect" Resulting from Differences in Elevation.



"Barrier Effect" Resulting from Typical Soundwall.

SOURCE: Impact Sciences, Inc. – May 2007

FIGURE 4



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  $L_{eq}$  and 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 decibels to sound levels occurring during the evening from 7 PM to 10 PM, and 10 decibels to sound levels occurring during the nighttime from 10 PM to 7 AM. The 5 and 10 decibel 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>7</sup>

## Introduction to 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, groundborne 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 referenced as 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 groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne 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

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<sup>7</sup> California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, (Sacramento, California: October 1998), pp. N51–N54.

buildings. **Figure 5, Typical Levels of Ground-Borne Vibration**, identifies the typical groundborne 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 Specific Plan area, existing sensitive receptors include single-family residences across Santa Paula Creek to the west of the Specific Plan area. Residential units, schools, and assisted living facilities that would be permitted by the Specific Plan would also be sensitive to noise and vibration when complete and occupied.

## **EXISTING CONDITIONS**

### **Overview**

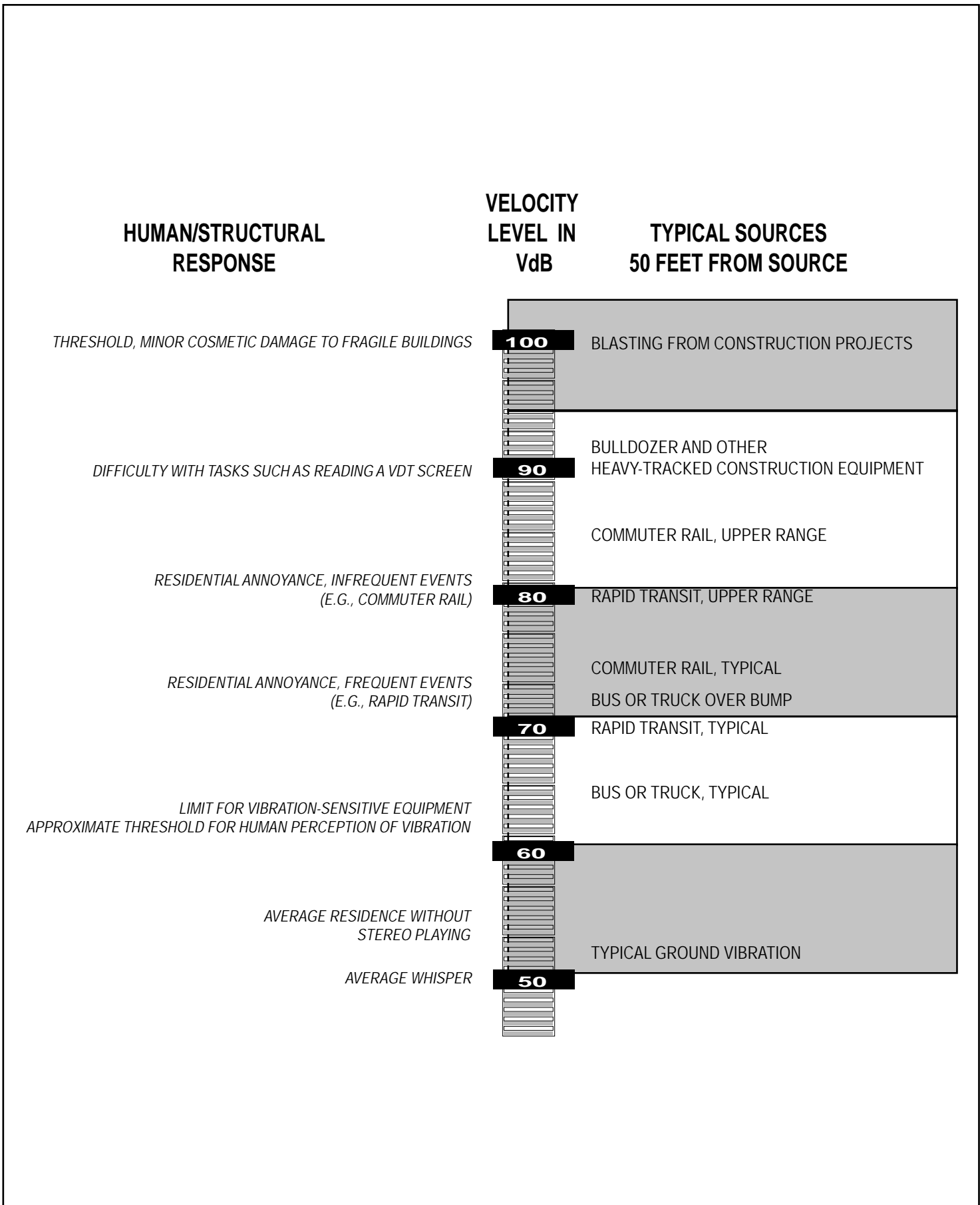
The majority of the site is currently cultivated with citrus and avocado orchards, and a small portion is currently used for cultivation of row crops. Several paved and dirt access roads traverse the site and foothills to the north. The site contains some structures related to the long-term agricultural uses of the site and consisting of houses, storage sheds, and a barn in the southern and southeastern portions of the site. The site also contains drainage ditches, earthen berms, and a network of irrigation pipes. Santa Paula Creek has been channelized along the west edge of the site. Haun Creek, which has not been improved, forms the eastern boundary of the site. Earth berms have been built on both sides of the creek by the property owners to provide flood protection for their properties.

### **Regulatory Setting**

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

As required by Government Code Section 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.



SOURCE: Impact Sciences, Inc. – May 2007

FIGURE 5

Typical Levels of Ground-Borne Vibration



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>8</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.*

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 is used below to determine thresholds of significance. In addition, the 60-dB(A) CNEL noise contour, as identified in the General Plan, extends on to a portion of the Specific Plan area and this noise impact analysis satisfies the requirement set in implementation measure 3a.

### ***City of Santa Paula Municipal Code***

The Specific Plan area is located outside the City's corporate boundary and its sphere of influence, but within the 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. SPMC Chapter 93 sets noise standards for land uses within the City. SPMC Section 93.21 establishes the acceptable exterior noise standard for residential uses of 65 dB(A) from 7:00 AM through 10:00 PM and 60 dB(A) from 10:00 PM through 7:00 AM. The exterior noise level standard for other noise-sensitive uses, including schools, libraries, hospitals, community care

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<sup>8</sup> City of Santa Paula Noise Element, 13, April 1998, p. N-19.



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. To date, the City has not amended the Municipal Code.

It should be noted that this noise study is provided at the specific plan level. As such, specific details of the project will be provided when Tract Maps are developed and submitted for approval. Future noise studies may be required to evaluate the potential noise impacts of the project specific conditions proposed in each Tract Map at that time.

The City of Santa Paula Municipal Code, Section 16.25.040, Compliance with Approved Specific Plan, states that:

- (A) When a specific plan is adopted for an area, the specific plan's land use designations, standards, and other requirements will supersede and control any contrary provision of this chapter. On issues that an adopted specific plan is silent, development within the specific plan area will be implemented pursuant to the development standards and procedures in this Title 16.*
- (B) All subdivision, public works projects, development agreements, and other development-related activity within a specific plan zone must be consistent with the adopted specific plan for that area. Land projects cannot be approved in an area zoned Specific Plan if a specific plan has not been adopted for that area.*

SPMC Section 93.23 states that construction activities between 8:00 AM and 6:00 PM Monday through Friday are exempt from the noise standards set in SPMC Section 93.21. A notice listing the times between which construction activities can take place, titled in letters at least 1 inch in height and placed at least 5 feet above ground level, must be posted at all entrances to a construction site.

### ***Ventura County General Plan***

The Specific Plan area is located in the unincorporated portion of Ventura County. The proposed Specific Plan 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 Telegraph Road between Harvard Boulevard and Hallock Drive, and South Mountain Road between Harvard Boulevard and Lemon Road.

The Ventura County Initial Study Guidelines provide thresholds to ensure consistent and complete assessment of noise impacts for proposed developments in accordance with the California Environmental Quality Act (CEQA), the *CEQA Guidelines*, the County Administrative Supplement implementing CEQA, and the County General Plan.<sup>9</sup> The General Plan (Section 2.16.2-1 of the Goals, Policies, and Programs<sup>10</sup>) establishes the following threshold criteria; above which significant noise impacts would be anticipated:

- (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  $L_{eq} 1H$  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. 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.  *$L_{eq} 1H$  of 55 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 6:00 AM to 7:00 PM.*
  - b.  *$L_{eq} 1H$  of 50 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 7:00 PM to 10:00 PM.*
  - c.  *$L_{eq} 1H$  of 45 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 10:00 PM to 6:00 AM.*

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<sup>9</sup> Ventura County, Initial Study Guidelines, February 2006.

<sup>10</sup> Ventura County, Planning Division, "Goals, Policies and Programs" in Ventura County General Plan (Ventura, California: Ventura County Planning Division, 6 December 2005).

*This standard is not applicable to increased traffic noise along any of the roads identified within the 2010 Regional Roadway Network (Figure 4.2.3) of the Public Facilities Appendix of the Ventura County General Plan. 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.*

*Discretionary development which would be impacted by noise or generate project related noise which cannot be reduced to meet the above standards, shall be prohibited. This policy does not apply to noise generated during the construction phase of a project if a statement of overriding considerations is adopted by the decision-making body in conjunction with the certification of a final Environmental Impact Report.*

### ***California Code of Regulations***

The California Noise Insulation Standards of 1988<sup>11</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>12</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 California Government Code Section 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

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<sup>11</sup> California Code of Regulations Title 24, Section 3501 et seq.

<sup>12</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).

ambient levels of 45 dB(A) or less.<sup>13</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 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>14</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.

## Caltrans

Streets and Highways Code Section 216 requires Caltrans to abate freeway traffic noise within school classrooms under certain circumstances. These circumstances include when a new freeway or modification to an existing freeway occurs that affects an existing school use; 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>15</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.

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<sup>13</sup> This requirement is based on the U.S. Environmental Protection Agency finding that an indoor noise level of 45 decibels as necessary to protect against sleep interference. Assuming a conservative structural noise insulation of 20 decibels for typical dwellings, 45 decibels corresponds to an outdoor CNEL of 65 decibels as minimizing sleep interference.

<sup>14</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.

<sup>15</sup> California Streets and Highway Code, Title 24, Section 216.

## 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 Specific Plan site.

## Off-Site Noise and Vibration Environment

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

Historically, the Fillmore and 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 has been discontinued along the Fillmore and 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 PM and 3:00 PM on Saturdays and Sundays.<sup>16</sup> The tracks are also used by one freight train, which passes by the Specific Plan area twice, traveling once in each direction, on Mondays, Wednesdays, and Fridays between the hours of 8:00 AM and 12:00 PM.<sup>17</sup> The Fillmore and Western Railway Company railroad right-of-way was purchased in 1995 by the Ventura County Transportation Commission (VCTC). Long-term plans for the Fillmore and Western Railway 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>18</sup>

The Santa Paula Airport is located on a 38-acre site south of SR-126, approximately 1 mile southwest of the Specific Plan area. 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>19</sup> The Noise Element identifies the primary noise concern associated with the airport as aerobatics, which are

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<sup>16</sup> Fillmore & Western Railway Company. "Weekend Scenic Excursion 2007." [Online] 30 April 2007. <[http://www.fwry.com/weekend/weekend\\_2007.html](http://www.fwry.com/weekend/weekend_2007.html)>.

<sup>17</sup> Telephone communication with Ray Michaca, Fillmore & Western Railway Company, 15 May 2007.

<sup>18</sup> Telephone communication with Kerry Forsythe, Deputy Director, Ventura County Transportation Commission, 23 May 2007.

<sup>19</sup> Ibid.

periodically practiced east of the City. Figure N-2 of the Noise Element, provided as **Figure 6, General Plan Figure N-2 – Existing Noise Contours**, of this study shows noise contours from SR-126, State Route 150 (SR-150) and the Santa Paula Airport. As shown, the combined 60 dB(A) contour extends approximately 1,000 feet into the southern portion of the Specific Plan area.<sup>20</sup>

## Monitored Noise Levels

To characterize the existing noise environment, noise level monitoring was conducted by Impact Sciences, Inc. on April 5, 6, 10, and 15, 2007 at four locations. Noise 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 and Western Railway railroad tracks at approximately 1:00 PM on April 15, 2007 while a Fillmore & Western Railway Company train passed by the Specific Plan area. The Larson-Davis Model 720 and 820 Controller Integrating Sound Level Meters satisfy the American National Standards Institute standard for general environmental noise measurement instrumentation.<sup>21</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 no construction or other abnormal noise conditions present during monitoring.

**Figure 7, Noise Monitoring Locations**, depicts the four noise monitoring locations. The first measurement was taken adjacent to Santa Paula Creek from the west, within the boundary of a single-family residential property just north of the eastern terminus of Richmond Drive. The second monitoring location was near the center of the Specific Plan area, 116 feet west of Padre Drive and 23 feet north of the unpaved road that intersects with Padre Drive 0.10 mile north of Loop Lane. The third noise measurement was taken in the southeastern corner of the Specific Plan area, 355 feet east of Padre Drive and 115 feet north of SR-126. The fourth measurement was taken 50 feet from the Fillmore and Western Railway railroad tracks and east of Padre Drive. **Table 3, Monitored Noise Levels**, contains the results of the monitoring conducted at the locations described above. As shown, noise levels in the residential community across Santa Paula Creek to the west of the Specific Plan area and within the center of the Specific Plan area are 54.3 and 57.2 CNEL, respectively. The noise level measured at monitoring

<sup>20</sup> City of Santa Paula. "Noise Element." *City of Santa Paula General Plan*. 13 April 1998. p. N-7.

<sup>21</sup> American National Standards Institute of the Acoustical Society of America, American National Standard Specification for Sound Level Meters, January 1983 (as amended).