IV. ENVIRONMENTAL IMPACT ANALYSIS

L. NOISE

INTRODUCTION

The information and analysis in this section is based primarily on the following report (refer to Appendix IV.L):

- *Noise Impact Analysis, Urban Crossroads, August 9, 2013.*

ENVIRONMENTAL SETTING

Fundamentals of Noise and Vibration

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear. Figure IV.L-1 presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

Range of Noise

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly 60 dBA, while loud jet engine noises equate to 110 dBA at approximately 100 feet, and can cause serious discomfort.

Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (Leq). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. In addition, the hourly Leq is the noise metric used to collect short-term noise level measurement samples and to estimate the 24-hour Community Noise Equivalent Levels (CNEL).

The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to dBA Leq sound levels in the evening from 7 p.m. to 10 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10 p.m. and 7 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure.

Traffic Noise Prediction

According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance,* provided by the Federal Highway Administration, the level of traffic noise depends on three primary factors: (1) the volume of the traffic; (2) the speed of the traffic; and (3) the vehicle mix within the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. A doubling of the traffic volume, assuming that the speed and vehicle mix do not change, results in a noise level increase of 3 dBA. The vehicle mix on a given roadway may also have an effect on community noise levels. As the number of medium and heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise level impacts will increase. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires on the roadway.

Noise Control

Noise control is the process of obtaining an acceptable noise environment for a particular observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor concept. In general, noise control measures can be applied to any and all of these three elements.

Ground Absorption

To account for the ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft site and hard site conditions. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground with landscaping, as compared with a 3.0 dBA drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. Based on our experience, soft site conditions better reflect the predicted noise levels. In addition, Caltrans' research has shown that the use of soft site conditions is more appropriate for the application of the FHWA traffic noise prediction model used in this analysis.

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140		
NEAR JET ENGINE		130	INTOLERABLE OR DEAFENING	
		120		HEARING LOSS
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100		
GAS LAWN MOWER AT 1m (3 ft)		90	VERY NOISY	
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		SLEEP DISTURBANCE
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		NO EFFECT
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Noise Technical Supplement By CALTRANS and Urban Crossroads, 2013.

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Figure IV.L-1
Typical Noise Levels

Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the view of the noise source.

Community Response to Noise

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another 25 percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels. An increase or decrease of 1.0 dBA cannot be perceived except in carefully controlled laboratory experiments. A 3.0 dBA increase may be perceptible outside of the laboratory. An increase of 5.0 dBA is often necessary before any noticeable change in community response (i.e., complaints) would be expected.

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon each individual's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level of the receptor;
- Noise receptor's perception that they are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Receptor's belief that the noise source can be controlled.

Recent studies have shown that changes in long-term noise levels are noticeable, and are responded to by people. For example, about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of 1.0 dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people begin complaining.

Land Use Compatibility with Noise

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches and residences are more sensitive to noise intrusion than are commercial or industrial activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process.

Vibration

According to the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment*, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure borne noise. Sources of groundborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency.

Vibration is described in terms of frequency and amplitude. Unlike sound, there is no way of measuring and reporting amplitude. Vibration is often described in units of velocity (inches per second), and discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts are generally associated with activities such as train operations, construction, and heavy truck movements.

Vibration is usually expressed in peak particle velocity (PPV) in inches per second (in/sec). Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response (annoyance). It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe human response to vibration.

The background vibration-velocity level in residential areas is usually approximately 50 VdB. Groundborne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. 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 is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Construction activities can generate groundborne vibrations, which can pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants. Construction vibrations can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations result from vibratory pile drivers, large pumps, horizontal directional drilling, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

Existing Noise Levels

To assess the existing noise level environment, four long-term 24-hour measurements were taken at locations in the Project study area. Figure IV.L-2 provides the boundaries of the Project study area and the noise level measurement locations. Urban Crossroads, Inc. recorded the noise level measurements on Monday, August 20, 2012.

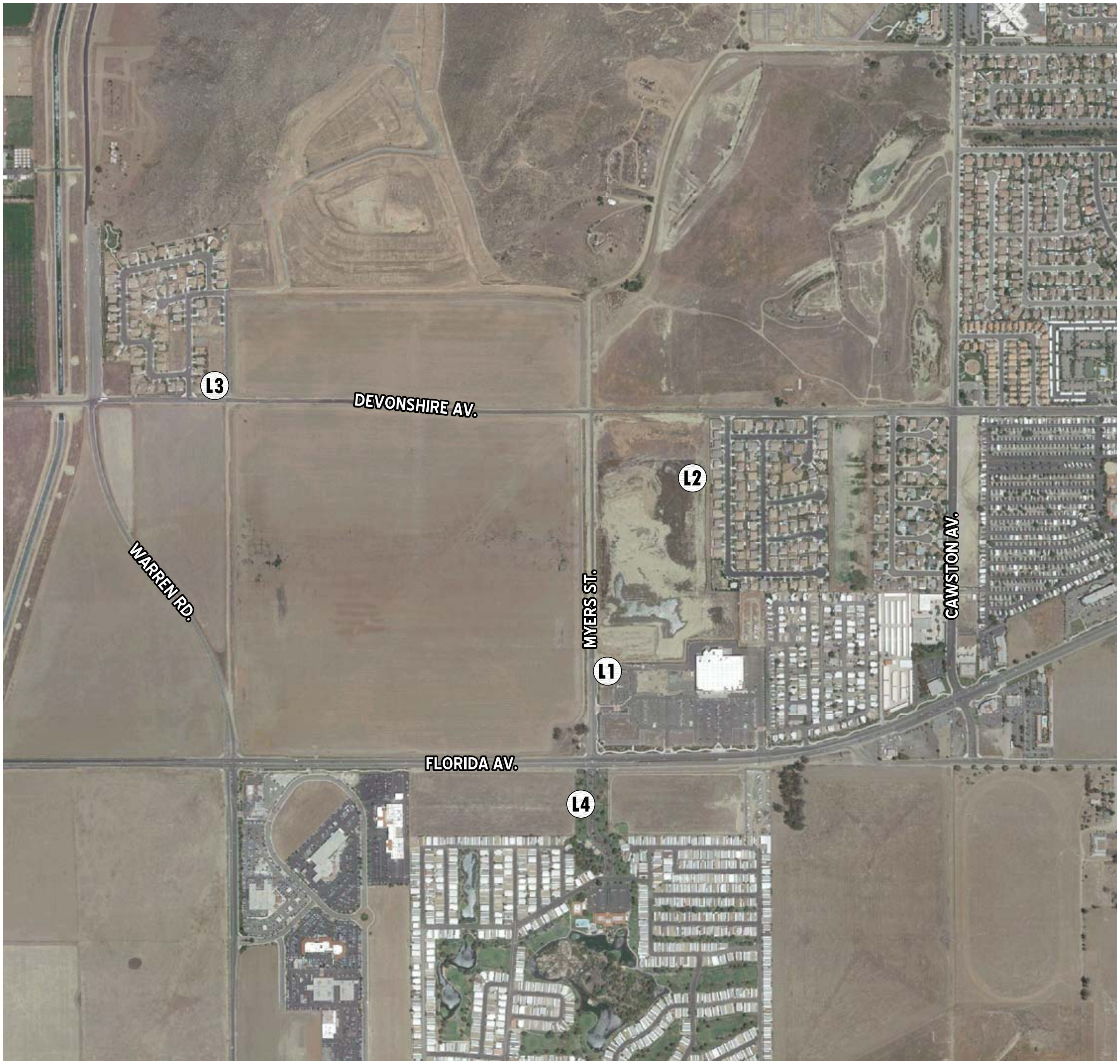
The results of the noise level measurements are presented in Table IV.L-1. Table IV.L-1 provides the energy (logarithmic) average daytime (7 am to 10 pm) and nighttime (10 pm to 7 am) hourly noise levels at each noise level measurement location. For comparison purposes, the average hourly Leq noise levels are shown on Table IV.L-1 in addition to the overall 24-hour CNEL noise levels. The actual hourly noise levels with the appropriate time of day noise penalties that were used to calculate the CNEL are provided in Appendix 5.2 of the Noise Impact Analysis (which is provided as Appendix IV.L of this Draft EIR).

The energy average hourly daytime noise levels range from 51.6 dBA Leq at noise level measurement location L2 to 60.2 dBA Leq at noise level measurement location L3. The nighttime energy average hourly noise levels range from 44.6 Leq dBA at location L2 to 55.9 dBA Leq at location L4. The CNEL noise level measurements with the appropriate time of day corrections produced noise levels ranging from 56.6 dBA CNEL at location L2 to 63.5 dBA CNEL at location L4.

The results of the noise level measurements show that the unmitigated ambient noise levels in the study area approach but do not currently exceed the City of Hemet (the "City") transportation related exterior noise levels of 65 dBA CNEL defined in the General Plan for residential land uses. The background ambient noise levels in the Project study area are dominated by the transportation related noise associated with the arterial roadway network.

Groundborne Vibration Levels

The existing source of groundborne vibration in the Project study area is associated primarily with heavy-duty vehicular travel (e.g., trash trucks, delivery trucks, and transit buses) on local roadways. Trucks and buses typically generate groundborne vibration velocity levels of around 63 VdB, and these levels could reach 72 VdB where trucks and buses pass over bumps in the road.



Legend

L4 = NOISE MEASUREMENT LOCATIONS

NORTH

Not To Scale

Source: Urban Crossroads, 2013.

CAJA Environmental Services, LLC

Figure IV.L-2
Noise Level Measurement Locations

Table IV.L-1
Long-Term (Ambient) Noise Level Measurements

Observer Location [1]	Date	Description	Hourly Noise Level (Leq dBA)[2] Daytime (7am to 10pm)	Hourly Noise Level (Leq dBA)[2] Nighttime (10pm to 7am)	CNEL
L1	8/20/2012	Located in the northeast corner of the WinCo Foods parking lot, near the project site and Myers Street.	56.3	48.2	58.9
L2	8/20/2012	Located behind the backyard of the homes on Appaloosa Drive to the east of the project site.	51.6	44.6	56.6
L3	8/20/2012	Located north west of the project site, on the corner of Devonshire Ave and Montero Ct.	60.2	53.2	63.1
L4	8/20/2012	Located near the corner of Florida Ave and Myers St. Meter was placed south of Florida Ave, before the gate to the entrance of Hemet West Mobile Estates.	56.8	55.9	63.5

[1] See Exhibit 4-A for the location of the monitoring sites.
[2] Energy (logarithmic) average hourly noise levels. The long-term noise level measurements printouts are included in Appendix 4.1.
Table prepared by Urban Crossroads, May 2013.

REGULATORY SETTING

State of California Noise Requirements

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the Noise Element is to "limit the exposure of the community to excessive noise levels."

City of Hemet General Plan

The City of Hemet has identified noise compatibility standards in Section 6.10 *Noise* in the General Plan Public Safety Element. This *Noise* section of the Public Safety Element is intended to control and abate environmental noise, and to protect the citizens of Hemet from excessive exposure to noise.

To control transportation-related noise sources such as arterial roads, freeways, airports, and railroads, the City of Hemet has specific noise level standards for all land use categories that are used to regulate traffic related noise level impacts. For the nearby noise sensitive receptor areas, the exterior noise levels should generally remain below 65 dBA CNEL while 70 dBA CNEL is acceptable for school playgrounds, active recreation areas, as well as commercial and industrial areas. For interior areas, the noise levels must remain below 45 dBA CNEL for noise sensitive residential land uses.

The following are General Plan Policies that are relevant to noise:

PS-11.1 **Noise Standards:** Enforce noise standards to maintain acceptable noise limits and protect existing areas with acceptable noise environments.

PS-11.2 **Design to Minimize Noise:** Encourage the use of siting and building design techniques as a means to minimize noise.

PS-11.3 **Evaluate Noise:** Evaluate potential noise conflicts for individual sites and projects, and require mitigation of all significant noise impacts (including construction and short-term noise impacts) as a condition of project approval.

PS-11.4 **Protect Noise-Sensitive Uses:** Protect noise-sensitive uses from new noise sources.

PS-12.1 **Traffic Noise:** Minimize noise conflicts between current and proposed land uses and the circulation network by encouraging compatible land uses around critical roadway segments with higher noise potential.

PS-13.2 **New Sensitive Uses:** Restrict the location of sensitive land uses near major noise sources to achieve the standards presented in Table 6.4.

PS-13.3 **Prevent Encroachment:** Prevent the encroachment of noise sensitive land uses into areas designated for use by existing or future noise generators.

City of Hemet Municipal Code Standards

The Project operational noise impacts are typically governed by a noise ordinance contained with the City's Municipal Code. While the City has identified specific stationary noise source standards in Chapter 30, Article II, Section 30-32, these are limited to the production of electrical or mechanical sound or noise from any property C-M or M zoned.

In addition, the City has set restrictions to control noise impacts associated with the construction of the proposed project. According to Chapter 30, Article II, Section 33, construction activities shall be permitted between the hours of 6:00 a.m. and 6:00 p.m. during the months of June through September and between the hours of 7:00 a.m. and 6:00 p.m. during the months of October through May. Saturday construction shall be permitted between the hours of 7:00 a.m. and 6:00 p.m. Sunday construction shall be prohibited. Exceptions to these standards may be granted only by the City building official and/or the City Council. This subsection is not intended to prohibit infrequent homeowner or small construction on the site of an existing home.

While the City's Municipal Code limits the hours of construction activity, it does not specifically address construction noise limits. To assess the potential project related noise level impacts, a construction reference noise level limit of 65 dBA Leq at a distance of 200 feet is used for the purpose of this analysis. Construction noise impacts that are plainly audible at distance of 200 feet from the properly line may be considered a "Noise Disturbance." Construction activities are generally focused within the project site at some distance from the property line. A construction noise reference distance of 200 feet represents a distance that reasonably accounts for typical construction impacts to neighboring noise sensitive receptors.

Vibration Standards

To address the human response (annoyance) to groundborne vibration, FTA has set forth guidelines for maximum acceptable vibration criteria for different land use types. These guidelines allow 80 VdB for residential uses and buildings where people normally sleep. To assess the potential for building damage, Caltrans guidelines recommend that a standard of 0.2 PPV not be exceeded for the protection of normal residential buildings.

ENVIRONMENTAL IMPACT ANALYSIS

Thresholds of Significance

In accordance with Appendix G to the CEQA Guidelines, a project would have a significant impact if the project would result in one or more of the following:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airstrip, expose people residing or working in the project area to excessive noise levels; or

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

As discussed in Section IV.A (Impacts Found to be Less Than Significant), the Project would not result in any impacts related to issue "f," and no further discussion of this issue is required.

Discussion of Thresholds of Significance

Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels and the location of noise-sensitive receptors in order to determine if a noise increase represents a significant adverse environmental effect. The Federal Highway Administration and Caltrans both identify changes in noise levels of greater than 3 dBA as "barely perceptible," while changes in 5 dBA are considered "readily perceptible." In a community situation, the noise exposure is extended over a long time period, and changes in noise levels occur over a period of years. For the purpose of this analysis, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people.

Off-site Project level noise impacts shall be considered significant if any of the following occur as a result of the Project:

1. Project related noise levels exceed applicable City standards.
2. Ambient conditions are below applicable standards, and Project-generated noise at receptor land uses would result in:
   (a) An exceedance of the suggested land uses/noise compatibility guidelines for surface transportation sources (mobile sources); or
   (b) An exceedance of the exterior noise standards defined in the City of Hemet Noise Ordinance (area/stationary sources).
3. If ambient noise conditions exceed applicable noise standards and Project-generated noise would create a "barely perceptible" 3 dBA or greater permanent increase in ambient exterior noise levels.
4. If Project-related construction activities occur on any weekday outside the hours of 7:00 a.m. and 6:00 p.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee or exceeds 65 dBA Leq at a distance of 200 feet during the approved daytime hours.

If short-term Project-generated construction source vibration levels could exceed Caltrans' recommended standard of 0.2 PPV with respect to the prevention of structural damage for normal buildings and the FTA maximum acceptable vibration standard of 80 vibration decibels (VdB) with respect to human response (annoyance) at vibration-sensitive land uses.

Methodology

FHWA Traffic Noise Prediction Model

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108 (the "FHWA Model"). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial); the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway); the total average daily traffic (ADT); the travel speed; the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume; the roadway grade; the angle of view (e.g., whether the roadway view is blocked); the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping); and the percentage of total ADT which flows each hour throughout a 24-hour period.

Traffic Noise Prediction Model Inputs

The Noise Impact Analysis (contained in Appendix IV.L of this Draft EIR, specifically Table 6-1) presents the off-site roadway parameters used to assess the off-site transportation noise impacts, identifies the 73 study area roadway segments, the functional roadway classifications according to the City of Hemet General Plan Circulation Element, and the number of lanes and vehicle speeds. For the purpose of this analysis, soft site conditions were used to analyze the traffic noise impacts for the Project study area.

Based on the *Ramona Creek Specific Plan Traffic Impact Analysis* prepared by Urban Crossroads, Inc. in March 2013, the off-site transportation noise impacts were estimated for the following twelve analysis scenarios:

- Existing (2012) Conditions (1 scenario);
- Existing plus Project Conditions, for each of the Proposed, Residential-Oriented, and Commercial-Oriented land use scenarios (3 scenarios);
- Opening Year (2015), Without and With Proposed, Residential-Oriented, and Commercial-Oriented Project (4 scenarios); and
- General Plan Buildout (Post-2035), Without and With Proposed, Residential-Oriented, and Commercial-Oriented Project (4 scenarios).

The traffic noise levels provided in this analysis are based on the average daily traffic volume forecasts provided in the Noise Impact Analysis (see Appendix IV.L of this Draft EIR, specifically Table 6-2). Table IV.L-2 presents the hourly traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA Noise Prediction Model.

Table IV.L-2
Hourly Traffic Flow Distribution[1]

Motor-Vehicle Type	Daytime (7am to 7pm)	Evening (7pm to 10pm)	Night (10pm to 7am)	Total % Traffic Flow
Automobiles	77.5%	12.9%	9.6%	97.42%
Medium Trucks	84.8%	4.9%	10.3%	1.84%
Heavy Trucks	86.5%	2.7%	10.8%	0.74%

[1]Typical Southern California Vehicle Mix.
Table prepared by Urban Crossroads, May 2013.

Vibration Assessment

This analysis focuses on the potential groundborne vibration associated with vehicular traffic and construction activities. Groundborne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway services. However, due to the rapid drop-off rate of groundborne vibration and the short duration of the associated events, vehicular traffic-induced groundborne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized in Table IV.L-3. Based on the representative vibration levels presented for various types of construction equipment, sensitive receptors located in proximity to construction operations could be exposed to groundborne vibration levels exceeding the recommended FTA and Caltrans guidelines of 80 VdB and 0.2 in/sec PPV, respectively.

Table IV.L-3
Vibration Source Levels of Construction Equipment

Equipment	PPV (in/sec) At 25 feet	Vibration Decibels (VdB) at 25 feet
Large bulldozer	0.089	87
Laded Trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[1] Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.
Table prepared by Urban Crossroads, May 2013.

Using the quantitative construction vibration and assessment methods defined by the FTA, it is possible to estimate the vibration damage and human response (annoyance).

Damage Assessment

Vibration impacts to structures may be estimated at any distance (D) using the following FTA damage assessment formula:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

PPV (equip)	= the peak particle velocity in in/sec of the equipment adjusted for distance
PPV (ref)	= is the reference vibration level in in/sec at 25 feet (from Table IV.L-3)
D	= is the distance from the equipment to the receiver

Human Response (Annoyance) Assessment

To describe the human response (annoyance) associated with vibration impacts, the FTA provides the following equation:

$$L_{VdB}(D) = L_{VdB}(25\text{ ft}) - 30\log(D/25)$$

Project Impacts

Impact IV.L-1: The Project would not result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, and impacts related to this issue would be less than significant with implementation of the provided mitigation measures.

Construction Noise

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment, including trucks, power tools, concrete mixers, and portable generators can reach high levels. Project construction is expected to occur in five stages: site preparation; grading; building construction; paving; and architectural coating.

Noise levels generated by heavy construction equipment can range from approximately 70 dBA to noise levels in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 78 dBA measured at 50 feet from the noise source to the receptor would be reduced to 72 dBA at 100 feet from the source to the receptor, and would be further reduced to 66 dBA at 200 feet from the source to the receptor.

The construction noise levels including the number and mix of construction equipment by construction phase are consistent with the data used to support the construction emissions in the *Ramona Creek Specific Plan Air Quality Impact Analysis* (refer to Appendix IV.D).

Tables IV.L-4 through IV.L-8 present the short-term construction noise levels for each stage of construction. The construction noise analysis indicates that the unmitigated Project construction noise levels are expected to range from 62.0 to 78.2 dBA Lmax at a distance of 200 feet. Based on the five phases of construction-related noise impacts, the noise impacts associated with the Project are expected to create temporary high-level noise impacts at receptors surrounding the Project site when certain activities occur near the Project property line. As such, construction of the Project would result in a potentially significant impact with respect to construction noise. However, Mitigation Measures L-1 through L-3 have been provided in order to reduce construction noise impacts to less than significant.

Table IV.L-4
Site Preparation Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor [2]	Hours of Operation [3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Water Trucks	3	40%	3.2	76.0	64.8
Rubber Tired Dozers	3	40%	3.2	79.0	67.8
Tractors/Loaders/Backhoes	4	40%	3.2	78.0	68.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					71.8
Distance to 65 dBA Leq Contour (Feet)					439

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8-hour workday.
Table prepared by Urban Crossroads, May 2013.

Operational Noise

The development of the Project would include a variety of land uses that may generate noise level impacts to adjacent noise sensitive land uses. According to the City's General Plan FEIR, future land uses would result in the siting of new noise sources near sensitive receptors, and would likely increase the number of noise sensitive receptors.

However, implementation of the City's Municipal Code and Draft General Plan policies and programs would require design features in new construction to reduce noise levels. The City's policies require noise to remain within acceptable limits and protect existing areas with acceptable noise environments (Policy PS-11.1), require evaluation of potential noise conflicts and mitigation of any conflicts as a condition of Project approval (Policy PS-11.3), protect noise-sensitive uses from new noise sources (e.g., commercial and industrial land uses) (Policy PS-11.4), require that noise-sensitive land uses be restricted near major noise sources (Policy PS-13.2), and prevent encroachment of sensitive land uses into areas designated for use by existing or future noise generators (Policy PS-13.3). Programs PS-P-27 and PS-P-29 require use of noise standards defined in policies (Table 4.11-8) and preparation of acoustical studies when noise standards are likely to be exceeded.

Table IV.L-5
Grading Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor [2]	Hours of Operation [3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Water Trucks	3	40%	3.2	76.0	64.8
Scrapers	4	40%	3.2	85.0	75.0
Graders	2	40%	3.2	85.0	72.0
Rubber Tired Dozers	3	40%	3.2	79.0	67.8
Tractors/Loaders/Backhoes	2	40%	3.2	78.0	65.0
Excavators	2	40%	3.2	81.0	68.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					78.2
Distance to 65 dBA Leq Contour (Feet)					912

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8-hour workday.
Table prepared by Urban Crossroads, May 2013.

Table IV.L-6
Building Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor [2]	Hours of Operation [3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Tractors/Loaders/Backhoes	3	40%	3.2	78.0	66.8
Forklifts	3	20%	1.6	75.0	60.7
Cranes	1	16%	1.3	81.0	61.0
Air Compressors	1	40%	3.2	78.0	62.0
Generator Sets	1	50%	4.0	81.0	65.9
Welder	1	40%	3.2	74.0	58.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					71.2
Distance to 65 dBA Leq Contour (Feet)					410

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8-hour workday.
Table prepared by Urban Crossroads, May 2013.

Table IV.L-7
Paving Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor [2]	Hours of Operation [3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Pavers	2	50%	4.0	77.0	65.0
Paving Equipment	2	40%	3.2	76.0	63.0
Rollers	2	20%	1.6	80.0	64.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					68.8
Distance to 65 dBA Leq Contour (Feet)					311

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8-hour workday.
Table prepared by Urban Crossroads, May 2013.

Table IV.L-8
Architectural Coating Noise Levels[1]

Equipment Type	Quantity	Usage Factor [2]	Hours of Operation [3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Air Compressor	1	40%	3.2	78.0	62.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					62.0
Distance to 65 dBA Leq Contour (Feet)					141

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8-hour workday.
Table prepared by Urban Crossroads, May 2013.

With implementation of the City's Municipal Code and Draft General Plan policies and programs, stationary and area-source noise (e.g., commercial, mixed-use development) would be reduced, and exposure of noise-sensitive receptors to other noise sources would be less than significant.

Reference Noise Levels

To estimate the Project off-site operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with development of the Project. The following section provides a detailed description of the reference noise level measurements shown in Table IV.L-9 used to estimate the Project's operational noise impacts.

Table IV.L-9
Reference Noise Level Measurements[1]

Noise Source	Duration (mm:ss)[4]	Distance From Source (Feet)	Noise Source Height (Feet)	Drop-Off Rate[5] (LEQ dBA)	Noise Level (Leq dBA)
Loading Dock Activities[1]	1:00	20.0	8.0	6.0	77.3
Truck Pass-By[2]	1:00	30.0	8.0	6.0	69.5
Air Condenser Units[3]	-	10.0	5.0	6.0	73.0

[1] As measured by Urban Crossroads, Inc. on 4/14/11.
[2] As measured by Urban Crossroads, Inc. on 4/14/11.
[3] Data provided by the Krack Technical Bulletin: 0607_469 Rev 0509
[4] Noise measurement duration is consistent will approximate time for each event to occur.
[5.] Noise level (dBA) drop-off rate per doubling of distance.
Table prepared by Urban Crossroads, May 2013.

It is important to note that the following projected noise levels assume the worst-case noise environment with the loading docks, semi-truck movements, and roof-top air conditioning units all operating simultaneously. In reality, these noise level impacts would vary throughout the day.

Loading Dock Activities

In order to evaluate the noise impacts associated with potential tractor-trailer (truck) unloading/loading activities, reference noise level measurements were taken by Urban Crossroads on April 14, 2011, at the Huntington Beach Walmart, located at the southwest corner of Goldenwest Street and Edinger Avenue. The primary noise generated by tractor-trailer unloading is the noise of the truck arriving, backing into the dock area, detaching the cab, attaching the cab to the empty trailer, and exiting the loading dock. Because the trailer seals to the loading dock, employees unload the tractor-trailer from the inside of the store. The receiving crew places a 20’ long rolling conveyor assembly inside the trailer to roll merchandise (on pallets or in boxes) into the store. The unmitigated noise level was measured at 77.3 dBA Leq at a distance of 20 feet from the tractor-trailer.

Truck Pass-By

As with the loading dock noise, reference noise level measurements were taken at the Huntington Beach Walmart by Urban Crossroads on April 14, 2011, in order to evaluate the noise impacts associated with truck (tractor-trailer) pass-by trips. The measurement included the exiting of the tractor-trailer. The unmitigated noise level was measured at 69.5 dBA Leq at a distance of 30 feet from the tractor-trailer.

Air Condenser Units

Rooftop mechanical ventilation units would be installed on the proposed mixed-use buildings located within the Project site. To assess the mechanical ventilation system (packaged heat pump) noise impacts, typical outdoor sound power levels were provided by Trane, which is an industry leader in air conditioning systems. The noise ratings provided by Trane indicated that the packaged heat pumps would produce unmitigated noise levels ranging from 75 to 82 dBA when measured at a distance of three feet.

To predict the worst-case future noise environment, a continuous reference noise level of 73 dBA at 10 feet was used to represent the roof-top mechanical ventilation system. Even though the mechanical ventilation system would cycle on and off throughout the day, this approach presents the worst-case noise condition. In addition, these units have been designed to provide cooling during the peak summer daytime periods, and it is unlikely that all the units would be operating continuously throughout the noise sensitive nighttime periods.

Project Operational Noise Levels

Based on the reference noise levels provided on Table IV.L-9, it is possible to estimate the stationary source noise levels from the Project at reference distance 200 feet from the property line. Table IV.L-10 presents the potential unmitigated exterior noise levels associated with the proposed mixed-use land uses within the Project at a distance of 200 feet from the property line. Table IV.L-10 indicates that the unmitigated hourly noise levels are expected to range from 31.4 to 53.0 dBA Leq with a combined noise level of 54.2 dBA Leq. The expected operational noise level impacts associated with the Project are lower than the existing ambient noise level conditions and would be overshadowed by traffic noise from adjacent roadways. Therefore, the Project would result in a less than significant operational noise impact.

Table IV.L-10
Project Only Stationary Source Impact Noise Level Projections

Noise Source	Reference Noise Level Distance (Feet)	Reference Noise Level (dBA)	Distance From Source to Property Line (Feet)	Source Noise Level At Property Line (dBA)	Reference Noise Level At 200 Feet From Property Line
Loading Dock Activities	20'	77.3	60.0	67.8	47.8
Truck Pass-By	30'	69.5	30.0	69.5	53.0
Air Condenser Units	10'	73.0	60.0	57.4	31.4
Overall Unmitigated Noise Level at 200 Feet From Property Line:					**54.2**
Table prepared by Urban Crossroads, May 2013.					

Traffic

Traffic noise impacts associated with the development of the Project include the potential on-site impacts experienced by the future residents of the community as well as the off-site traffic noise impacts associated with the increased Project traffic on nearby streets within the study area.

On-Site Traffic Noise

Areas within the Project site would be exposed to significant traffic noise levels from neighboring Florida Avenue (SR-74). In addition, the Project site would experience traffic noise impacts from Warren Road, Myers Street, and Devonshire Avenue. The Project site is also located approximately ¾ of a mile north of the Hemet Ryan Airport. However, the Project site is located well outside the 60 dBA CNEL aircraft noise contour boundaries. According to the City of Hemet Land Use Compatibility for Community Noise Environments the noise exposure associated with the Hemet Ryan Airport is considered "Normally Acceptable."

<u>Exterior Noise Analysis</u>

A review of the long-range general plan buildout traffic noise levels shown in Table IV.L-11 suggests that the unmitigated exterior on-site noise level impacts levels are expected to range from 58.3 to 68.3 in the noise sensitive residential land uses. Based on the City of Hemet *Land Use Compatibility for Community Noise Environments,* exterior noise levels of less than 60 dBA CNEL are considered *"Normally Acceptable"* with noise levels of less than 70 dBA CNEL considered as "*Conditionally Acceptable.*" Noise levels that are considered "*Conditionally Acceptable*" require a detailed analysis of the noise reduction requirements and the needed insulation features.

The exterior noise levels expected in the mixed-use (shopping center) land use are estimated to range from 71.3 to 76.1. These levels (included in Appendix 7.1 of the Noise Impact Analysis, which is Appendix IV.L of this Draft EIR) are consistent with the office buildings, business commercial and professional land use category identified in the *Land Use Compatibility for Community Noise Environments.* The noise levels in the mixed-use land use category are considered *"Conditionally Acceptable"* with exterior noise levels ranging between 75 and 80 dBA CNEL. No exterior noise mitigation is needed for the proposed mixed-use development in Planning Area 3 adjacent to Florida Avenue. The areas impacted by the high traffic noise levels from Florida Avenue are currently planned as mixed-use. Exterior noise mitigation is typically not required for multi-family residential projects or commercial shopping centers contained within mixed-use developments. However, on-site traffic noise impacts would be potentially significant for single-family homes adjacent to portions of Old Warren Road, Warren Road, Myers Street, and Devonshire Avenue. Mitigation Measures L-4 and L-5 (requiring construction of a noise barrier) have been provided in order to reduce this impact to less than significant.

<u>Off-Site Traffic Noise</u>

To assess the off-site traffic CNEL noise level impacts associated with development of the Project, noise contours were developed based on the *Ramona Creek Specific Plan Traffic Impact Analysis (March 2013)*. Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Traffic noise contour boundaries are typically calculated at distances of 100 feet from a roadway centerline.

To quantify the Project's traffic noise impacts on the surrounding off-site areas, the changes in traffic noise levels on 73 roadway segments surrounding the Project were calculated based on the changes in the average daily traffic volumes. The off-site noise contours were used to assess the Project's incremental off-site traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic.

Table IV.L-11
On-Site Exterior Noise Levels (dBA CNEL)[1]

Roadway	Segment	Planning Area	Unmitigated Noise Level (dBA CNEL)	Mitigated Noise Level (dBA CNEL)	Recommended Barrier Height (feet)
Old Warren Road	between Celeste Road and Devonshire Avenue	9	60.8	-[2]	-
Warren Road	north of Florida Avenue	1	71.3	65.0	6.0
Driveway 3	south of Devonshire Avenue	5, 6, 7, 8	63.1	-[2]	-
Driveway 4	north of Florida Avenue	3	63.9	-[2]	-
Myers Street	north of Devonshire Avenue	10	63.5	-[2]	-
Myers Street	between Devonshire Avenue and Driveway 8	2	64.1	-[2]	-
Myers Street	between Driveway 8 and Driveway 9	4	64.3	-[2]	-
Myers Street	between Driveway 9 and Driveway 10	4	64.8	-[2]	-
Myers Street	between Driveway 10 and Florida Avenue	3	67.0	-[3]	
Celeste Road	Old Warren Road and Driveway 5	9	60.6	-[2]	-
Celeste Road	Driveway 5 and Myers Street	10	58.3	-[2]	-
Devonshire Avenue	Old Warren Road and Driveway 3	1, 8, 9	68.3	61.8	6.0
Devonshire Avenue	Driveway 3 to Driveway 6	7, 9	67.9	61.4	6.0
Devonshire Avenue	Driveway 6 to Myers Street	1, 2, 10	68.0	61.5	6.0
A Street	West of Myers Street	2, 3, 4, 5, 6	61.5	-	-
Florida Avenue	between Warren Road and Driveway 2	3	76.1	-[3]	-
Florida Avenue	between Driveway 2 and Driveway 4	3	76.1	-[3]	-
Florida Avenue	between Driveway 4 and Driveway 7	3	75.8	-[3]	-
Florida Avenue	between Driveway 7 and Myers Street	3	75.8	-[3]	-

[1] Estimated exterior noise levels based on the Ramona Creek Illustrative Site Plan.
[2] No exterior noise mitigation required, unmitigated exterior noise level does not exceed and 65 dBA CNEL.
[3] No exterior noise mitigation required for mixed use (shopping center) activities.
Table prepared by Urban Crossroads, May 2013.

Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, 60, and 55 dBA noise levels. The distance from the centerline of the roadway to the CNEL contour boundaries for roadways in the Project's vicinity are presented in the Noise Impact Analysis (Appendix IV.L of this Draft EIR, Tables 7-2 through 7-13). The noise contours do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. In addition, since the noise contours reflect the modeling of vehicular noise along area roadways, they appropriately do not reflect noise contribution from the surrounding commercial and industrial uses or railroad activities in the Project area.

Existing Off-Site Traffic Noise Level Contributions

Table IV.L-12 presents a comparison of the existing Without and With Project conditions CNEL noise levels. As shown therein, the Project is expected to generate an unmitigated exterior noise level increase ranging from -1.0 dBA CNEL to 2.7 dBA CNEL. However, the segments located near the Project Site adjacent to Myers Street are expected to experience an off-site transportation noise level impact ranging from 2.4 to 6.7 dBA CNEL. While these segments would experience a noise level impact of greater than 3 dBA CNEL, they are not expected to exceed the City's 65 dBA CNEL exterior noise level standard for noise sensitive residential land uses. Table IV.L-12 shows that the off-site study area roadway segments (expect those near Myers Street) would not experience a readily perceptible noise level increase above 3.0 dBA CNEL. Based on the thresholds of significance, the Project would not create a significant off-site traffic noise level impact on the study area roadway segments for existing conditions.

Opening Year 2015 Off-Site Traffic Noise Level Contributions

Table IV.L-13 presents a comparison of the Year 2015 Without and With Project conditions CNEL noise levels. As shown therein, the Project is expected to generate an unmitigated exterior noise level increase ranging from 0.0 dBA CNEL to 1.8 dBA CNEL. However, the segments located near the Project site adjacent to Myers Street are expected to experience an off-site transportation noise level impact ranging from 1.8 to 3.5 dBA CNEL. While these segments would experience a noise level impact of greater than 3 dBA CNEL, they are not expected to exceed the City's 65 dBA CNEL exterior noise level standard for noise sensitive residential land uses. Table IV.L-13 shows that the off-site study area roadway segments (except those near Myers Street) would not experience a readily perceptible noise level increase above 3.0 dBA CNEL. Based on the thresholds of significance, the Project would not create a significant off-site traffic noise level impact on the study area roadway segments for Opening Year 2015 conditions.

Off-Site Transportation Related Project Noise Impacts

Project-related vehicular source noise may affect permanent and on-going ambient noise conditions and would not be considered a temporary or periodic noise impact. Applying the significance criteria described above, the Project would not create a significant off-site traffic noise level impact on the study area roadway segments.

Table IV.L-12
Existing Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 feet (dBA) No Project	CNEL at 100 feet (dBA) With Project	CNEL at 100 feet (dBA) Project Addition	Potential Significant Impact? [1]
1	Warren Road	south of Ramona Expressway	60.4	62.0	1.6	No
2	Warren Road	north of Cottonwood Avenue	62.7	63.7	1.0	No
3	Warren Road	south of Cottonwood Avenue	63.2	64.6	1.3	No
4	Warren Road	north of Esplanade Avenue	63.4	64.7	1.3	No
5	Warren Road	south of Esplanade Avenue	64.0	65.5	1.5	No
6	Warren Road	north of Devonshire Avenue	64.1	65.6	1.5	No
7	Warren Road	south of Devonshire Avenue	63.3	64.1	0.8	No
8	Warren Road	north of Florida Avenue (SR-74)	63.3	64.2	0.8	No
9	Warren Road	between Florida Avenue (SR-74) and Auto Boulevard	65.6	66.4	0.8	No
10	Warren Road	south of Auto Boulevard	65.0	65.8	0.8	No
11	Warren Road	north of Stetson Avenue	64.6	65.3	0.8	No
12	Warren Road	south of Stetson Avenue	63.2	64.0	0.8	No
13	Warren Road	north of Mustang Way	63.5	64.3	0.7	No
14	Warren Road	south of Mustang Way	64.6	65.1	0.5	No
15	Warren Road	east of Simpson Road	64.2	64.8	0.5	No
16	Warren Road	between Simpson Road and Domenigoni Parkway	62.6	63.3	0.7	No
17	Myers Street	between Devonshire Avenue and Driveway 8	54.4	57.7	3.4	No
18	Myers Street	between Driveway 8 and Driveway 9	54.4	58.2	3.8	No
19	Myers Street	between Driveway 9 and Driveway 10	53.5	59.0	5.5	No
20	Myers Street	between Driveway 10 and Driveway 11	53.5	59.8	6.3	No
21	Myers Street	between Driveway 11 and Florida Avenue (SR-74)	53.5	60.2	6.7	No
22	Myers Street	south of Florida Avenue (SR-74)	54.6	57.0	2.4	No
23	Cawston Avenue	south of Menlo Avenue	61.2	62.3	1.1	No
24	Cawston Avenue	north of Devonshire Avenue	61.2	62.3	1.1	No
25	Cawston Avenue	south of Acacia Avenue	57.0	57.0	0.0	No
26	Sanderson Avenue	between Fruitvale Avenue and Menlo Avenue	66.5	66.7	0.2	No
27	Sanderson Avenue	between Florida Avenue (SR-74) and Acacia Avenue	66.4	66.6	0.2	No
28	Sanderson Avenue	between Acacia Avenue and Whittier Avenue	66.2	66.5	0.3	No
29	Sanderson Avenue	between Whittier Avenue and Wentworth Drive	66.2	66.5	0.3	No
30	Sanderson Avenue	between Wentworth Drive and Tanya Avenue	65.8	66.1	0.3	No
31	Sanderson Avenue	between Tanya Avenue and Stetson Avenue	65.7	65.9	0.3	No
32	Ramona Expressway	west of Warren Road	65.5	65.9	0.4	No
33	Menlo Avenue	east of Cawston Avenue	58.1	58.1	0.0	No
34	Menlo Avenue	west of Sanderson Avenue	58.1	59.0	1.0	No
35	Devonshire Avenue	west of Warren Road	60.5	61.2	0.7	No

Table IV.L-12
Existing Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 feet (dBA)			Potential Significant Impact? [1]
			No Project	With Project	Project Addition	
36	Devonshire Avenue	east of Warren Road	59.8	62.1	2.4	No
37	Devonshire Avenue	west of Old Warren Road	59.8	62.5	2.7	No
38	Devonshire Avenue	between Old Warren Road and Driveway 3	59.8	62.2	2.3	No
39	Devonshire Avenue	between Driveway 3 and Driveway 6	59.8	61.6	1.8	No
40	Devonshire Avenue	between Driveway 6 and Myers Street	59.8	61.6	1.8	No
41	Devonshire Avenue	east of Myers Street	59.7	62.0	2.3	No
42	Devonshire Avenue	west of Cawston Avenue	62.1	63.5	1.5	No
43	Devonshire Avenue	east of Cawston Avenue	63.0	62.0	-1.0	No
44	Devonshire Avenue	west of Sanderson Avenue	63.0	62.0	-1.0	No
45	Devonshire Avenue	east of Sanderson Avenue	62.0	62.3	0.3	No
46	Devonshire Avenue	west of Kirby Street	62.0	62.1	0.2	No
47	Florida Avenue (SR-74)	west of Juniper Flats Road	67.8	68.0	0.2	No
48	Florida Avenue (SR-74)	east of Juniper Flats Road	68.0	68.4	0.3	No
49	Florida Avenue (SR-74)	west of Winchester Road (SR-79)	67.7	68.2	0.5	No
50	Florida Avenue (SR-74)	east of Winchester Road (SR-79)	68.5	69.0	0.5	No
51	Florida Avenue (SR-74)	west of Four Seasons Boulevard	68.7	69.2	0.5	No
52	Florida Avenue (SR-74)	between Four Seasons Boulevard and California Avenue	68.7	69.3	0.6	No
53	Florida Avenue (SR-74)	east of California Avenue	68.3	68.8	0.5	No
54	Florida Avenue (SR-74)	west of Warren Road	68.3	69.1	0.8	No
55	Florida Avenue (SR-74)	between Warren Road and Driveway 2	68.1	69.1	1.1	No
56	Florida Avenue (SR-74)	between Driveway 2 and Driveway 4	68.1	69.1	1.0	No
57	Florida Avenue (SR-74)	between Driveway 4 and Driveway 7	68.1	68.8	0.8	No
58	Florida Avenue (SR-74)	between Driveway 7 and Myers Street	68.1	68.7	0.7	No
59	Florida Avenue (SR-74)	east of Myers Street	68.1	69.1	1.1	No
60	Florida Avenue (SR-74)	west of Acacia Avenue	68.3	69.3	1.0	No
61	Florida Avenue (SR-74)	between Acacia Avenue and Cawston Avenue	67.9	68.8	0.9	No
62	Florida Avenue (SR-74)	east of Cawston Avenue	65.6	66.1	0.5	No
63	Florida Avenue (SR-74)	west of Sanderson Avenue	65.6	66.4	0.8	No
64	Florida Avenue (SR-74)	east of Sanderson Avenue	65.4	66.1	0.7	No
65	Florida Avenue (SR-74)	west of Kirby Street	66.4	66.9	0.4	No
66	Florida Avenue (SR-74)	east of Kirby Street	66.0	66.4	0.4	No
67	Florida Avenue (SR-74)	west of Gilmore Street	66.0	66.4	0.4	No
68	Florida Avenue (SR-74)	east of Gilmore Street	65.8	66.3	0.5	No
69	Florida Avenue (SR-74)	west of Lyon Avenue	65.8	66.3	0.5	No
70	Florida Avenue (SR-74)	east of Lyon Avenue	65.8	66.0	0.2	No
71	Florida Avenue (SR-74)	west of Palm Avenue	65.8	66.1	0.3	No
72	Acacia Avenue	between Florida Avenue (SR-74) and Cawston Avenue	56.0	57.9	1.8	No
73	Acacia Avenue	west of Sanderson Avenue	59.5	60.4	0.9	No

[1] A significant impact occurs when the noise level exceeds 65 dBA CNEL and the project generates a noise level increase of greater than 3.0 dBA.
Table prepared by Urban Crossroads, May 2013.

Table IV.L-13
Opening Year (2015) Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 feet (dBA)			Potential Significant Impact? [1]
			No Project	With Project	Project Addition	
1	Warren Road	south of Ramona Expressway	62.7	63.7	1.0	No
2	Warren Road	north of Cottonwood Avenue	64.6	65.3	0.7	No
3	Warren Road	south of Cottonwood Avenue	65.1	66.0	0.9	No
4	Warren Road	north of Esplanade Avenue	65.2	66.1	0.9	No
5	Warren Road	south of Esplanade Avenue	65.5	66.6	1.1	No
6	Warren Road	north of Devonshire Avenue	65.6	66.7	1.1	No
7	Warren Road	south of Devonshire Avenue	65.7	66.1	0.5	No
8	Warren Road	north of Florida Avenue (SR-74)	65.7	66.2	0.5	No
9	Warren Road	between Florida Avenue (SR-74) and Auto Boulevard	67.2	67.8	0.5	No
10	Warren Road	south of Auto Boulevard	66.7	67.3	0.5	No
11	Warren Road	north of Stetson Avenue	66.7	67.2	0.5	No
12	Warren Road	south of Stetson Avenue	65.6	66.1	0.5	No
13	Warren Road	north of Mustang Way	65.8	66.3	0.4	No
14	Warren Road	south of Mustang Way	66.3	66.6	0.3	No
15	Warren Road	east of Simpson Road	66.0	66.4	0.4	No
16	Warren Road	between Simpson Road and Domenigoni Parkway	64.6	65.0	0.4	No
17	Myers Street	between Devonshire Avenue and Driveway 8	58.2	60.0	1.8	No
18	Myers Street	between Driveway 8 and Driveway 9	58.2	60.2	2.0	No
19	Myers Street	between Driveway 9 and Driveway 10	57.7	60.5	2.8	No
20	Myers Street	between Driveway 10 and Driveway 11	58.1	61.4	3.3	No
21	Myers Street	between Driveway 11 and Florida Avenue (SR-74)	58.2	61.7	3.5	No
22	Myers Street	south of Florida Avenue (SR-74)	54.8	57.1	2.3	No
23	Cawston Avenue	south of Menlo Avenue	61.9	62.8	0.9	No
24	Cawston Avenue	north of Devonshire Avenue	61.9	62.8	0.9	No
25	Cawston Avenue	south of Acacia Avenue	59.9	59.9	0.0	No
26	Sanderson Avenue	between Fruitvale Avenue and Menlo Avenue	68.0	68.1	0.1	No
27	Sanderson Avenue	between Florida Avenue (SR-74) and Acacia Avenue	67.6	67.7	0.1	No
28	Sanderson Avenue	between Acacia Avenue and Whittier Avenue	67.7	68.0	0.2	No
29	Sanderson Avenue	between Whittier Avenue and Wentworth Drive	68.0	68.2	0.2	No
30	Sanderson Avenue	between Wentworth Drive and Tanya Avenue	67.7	67.9	0.2	No
31	Sanderson Avenue	between Tanya Avenue and Stetson Avenue	67.6	67.8	0.2	No
32	Ramona Expressway	west of Warren Road	66.7	67.0	0.3	No
33	Menlo Avenue	east of Cawston Avenue	58.2	59.5	1.4	No
34	Menlo Avenue	west of Sanderson Avenue	59.6	60.3	0.7	No
35	Devonshire Avenue	west of Warren Road	61.9	62.4	0.6	No

Table IV.L-13
Existing Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 feet (dBA)			Potential Significant Impact? [1]
			No Project	With Project	Project Addition	
36	Devonshire Avenue	east of Warren Road	61.9	63.8	1.8	No
37	Devonshire Avenue	west of Old Warren Road	62.3	64.0	1.7	No
38	Devonshire Avenue	between Old Warren Road and Driveway 3	61.6	63.4	1.7	No
39	Devonshire Avenue	between Driveway 3 and Driveway 6	61.6	62.9	1.3	No
40	Devonshire Avenue	between Driveway 6 and Myers Street	61.6	62.9	1.3	No
41	Devonshire Avenue	east of Myers Street	61.3	63.0	1.7	No
42	Devonshire Avenue	west of Cawston Avenue	63.6	64.7	1.1	No
43	Devonshire Avenue	east of Cawston Avenue	62.3	63.0	0.7	No
44	Devonshire Avenue	west of Sanderson Avenue	63.9	64.3	0.4	No
45	Devonshire Avenue	east of Sanderson Avenue	62.7	63.0	0.3	No
46	Devonshire Avenue	west of Kirby Street	62.6	62.8	0.2	No
47	Florida Avenue (SR-74)	west of Juniper Flats Road	69.0	69.2	0.2	No
48	Florida Avenue (SR-74)	east of Juniper Flats Road	69.2	69.4	0.2	No
49	Florida Avenue (SR-74)	west of Winchester Road (SR-79)	69.0	69.4	0.4	No
50	Florida Avenue (SR-74)	east of Winchester Road (SR-79)	69.9	70.3	0.4	No
51	Florida Avenue (SR-74)	west of Four Seasons Boulevard	70.0	70.4	0.4	No
52	Florida Avenue (SR-74)	between Four Seasons Boulevard and California Avenue	70.1	70.6	0.4	No
53	Florida Avenue (SR-74)	east of California Avenue	69.4	70.0	0.6	No
54	Florida Avenue (SR-74)	west of Warren Road	69.4	70.0	0.6	No
55	Florida Avenue (SR-74)	between Warren Road and Driveway 2	69.6	70.4	0.8	No
56	Florida Avenue (SR-74)	between Driveway 2 and Driveway 4	69.6	70.3	0.7	No
57	Florida Avenue (SR-74)	between Driveway 4 and Driveway 7	69.6	70.2	0.5	No
58	Florida Avenue (SR-74)	between Driveway 7 and Myers Street	69.6	70.1	0.5	No
59	Florida Avenue (SR-74)	east of Myers Street	69.4	70.2	0.8	No
60	Florida Avenue (SR-74)	west of Acacia Avenue	69.8	70.5	0.8	No
61	Florida Avenue (SR-74)	between Acacia Avenue and Cawston Avenue	69.2	69.9	0.7	No
62	Florida Avenue (SR-74)	east of Cawston Avenue	66.8	67.5	0.7	No
63	Florida Avenue (SR-74)	west of Sanderson Avenue	67.2	67.8	0.6	No
64	Florida Avenue (SR-74)	east of Sanderson Avenue	66.6	67.1	0.5	No
65	Florida Avenue (SR-74)	west of Kirby Street	67.5	67.8	0.4	No
66	Florida Avenue (SR-74)	east of Kirby Street	67.1	67.4	0.3	No
67	Florida Avenue (SR-74)	west of Gilmore Street	67.1	67.2	0.1	No
68	Florida Avenue (SR-74)	east of Gilmore Street	67.0	67.4	0.3	No
69	Florida Avenue (SR-74)	west of Lyon Avenue	67.0	67.3	0.3	No
70	Florida Avenue (SR-74)	east of Lyon Avenue	66.9	67.1	0.2	No
71	Florida Avenue (SR-74)	west of Palm Avenue	66.9	67.1	0.2	No
72	Acacia Avenue	between Florida Avenue (SR-74) and Cawston Avenue	58.5	59.6	1.1	No
73	Acacia Avenue	west of Sanderson Avenue	62.5	63.0	0.5	No

[1] A significant impact occurs when the noise level exceeds 65 dBA CNEL and the project generates a noise level increase of greater than 3.0 dBA.
Table prepared by Urban Crossroads, May 2013.

Impact IV.L-2: The Project would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels, and impacts related to this issue would be less than significant.

Construction Vibration

It is expected that groundborne vibration from Project construction activities would cause only intermittent, localized intrusion. The Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment. Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact.

- Trucks. Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Groundborne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the FTA. Construction activities that would occur within the Project site are expected to including grading and excavation, which would have the potential to generate low levels of groundborne vibration. Using the vibration source level of construction equipment provided on Table IV.L-3 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. The Project's vibration impacts were estimated using a reference distance of 200 feet.

Table IV.L-14 shows that the expected Project-related vibration velocities could reach up to as high as 0.0039 inches per second (PPV) at a distance of 200 feet from the source activity depending on the type of construction equipment in use. This corresponds to a velocity level of 59.9 VdB at 200 feet from the source activity. Using the construction vibration assessment methods provided by the FTA, the Project would not include nor require equipment, facilities, or activities that would result in groundborne vibration damage or in a perceptible human response (annoyance). As such, Project impacts with respect to groundborne vibration during construction would be less than significant.

Impact IV.L-3: The Project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, and impacts would be less than significant.

As described under Impact IV.L-1, the expected operational noise level impacts associated with the Project are lower than the existing ambient noise level conditions and would be overshadowed by traffic noise from adjacent roadways. In addition, the Project would not create a significant off-site traffic noise level impact on the study area roadway segments. Therefore, the Project would not result in a substantial permanent increase in ambient noise levels in the Project vicinity, and impacts would be less than significant.

Table IV.L-14
Vibration Level from Construction Equipment

Equipment	Estimated PPV at 25 feet (in/sec)	Estimated Vibration Levels at 25 feet (VdB)	Estimated PPV at 200 feet (in/sec)	Estimate Vibration Levels at 200 feet (VdB)
Small bulldozer	0.003	58	0.0001	30.9
Jackhammer	0.035	79	0.0015	51.9
Laded Trucks	0.076	86	0.0034	58.9
Large bulldozer	0.089	87	0.0039	59.9
		FTA Criteria	0.2000	80.0
		Significant Impact?	No	No

[1] *Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.*
Table prepared by Urban Crossroads, May 2013.

Impact IV.L-4: The Project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, and impacts related to this issue would be less than significant with implementation of the provided mitigation measures.

As also described under Impact IV.L-1, the unmitigated Project construction noise levels are expected to range from 62.0 to 78.2 dBA Lmax at a distance of 200 feet. Based on the five phases of construction-related noise impacts, the noise impacts associated with the Project are expected to create temporary high-level noise impacts at receptors surrounding the Project site when certain activities occur near the Project property line. However, implementation of Mitigation Measures L-1 through L-3 would reduce the Project's impacts to less than significant.

Impact IV.L-5: The Project would not result in exposure of people residing or working in the project area to excessive noise levels associated with an airport land use plan.

The Project site is located approximately ¾ of a mile north of the Hemet Ryan Airport. However, the Project site is located well outside the 60 dBA CNEL aircraft noise contour boundaries. According to the City of Hemet Land Use Compatibility for Community Noise Environments the noise exposure associated with the Hemet Ryan Airport is considered "Normally Acceptable." Further, as described under Impact IV.L-1, construction noise levels would be less than significant with implementation of Mitigation Measures L-1 through L-3. In addition, on-site traffic noise impacts would be mitigated with implementation of Mitigation Measure L-4. All other noise impacts are less than significant without mitigation. As such, the Project would not expose people in the Project area to excessive noise levels associated with an airport land use plan.

CUMULATIVE IMPACTS

Construction Impacts

Development of the Project in conjunction with the related projects would result in an increase in construction-related noise in the City. However, each of the related projects would be subject to the City's restrictions to control construction noise impacts, which are contained in the City's Municipal Code (Chapter 30, Article II, Section 33). As provided therein, construction activities shall be permitted between the hours of 6:00 a.m. and 6:00 p.m. during the months of June through September and between the hours of 7:00 a.m. and 6:00 p.m. during the months of October through May. Saturday construction shall be permitted between the hours of 7:00 a.m. and 6:00 p.m. Sunday construction shall be prohibited. With conformance with Chapter 30, Article II, Section 33 of the Municipal Code, the cumulative construction noise impacts would be less than significant.

While the City's Municipal Code limits the hours of construction activity as described above, it does not specifically address construction noise limits. To assess the potential Project related noise level impacts, a construction reference noise level limit of 65 dBA Leq at a distance of 200 feet was used, as construction noise impacts that are plainly audible at distance of 200 feet from the properly line may be considered a "Noise Disturbance." With implementation of Mitigation Measures L-1 through L-3, the Project's construction noise impact was found to be less than significant. As such, the Project would not contribute to a significant cumulative impact.

Operational Impacts

Table IV.L-15 presents a comparison of the General Plan Buildout (Post-2035) Without and With Project conditions CNEL noise levels. As shown therein, the Project is expected to generate an unmitigated exterior noise level increase ranging from -0.5 dBA CNEL to 2.1 dBA CNEL. Table IV.L-14 shows that all of the off-site study area roadway segments (including those near Myers Street) would not experience a readily perceptible noise level increase above 3.0 dBA CNEL. As such, the Project would not contribute to a significant cumulative off-site traffic noise level impact on the study area roadway segments for General Plan Buildout (Post-2035) conditions.

MITIGATION MEASURES

Construction Noise

Because the Project potentially could result in excessive noise levels during construction, the following mitigation measures are required:

L-1: During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.

Table IV.L-15
General Plan Buildout (Post-2035) Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 feet (dBA) No Project	With Project	Project Addition	Potential Significant Impact? [1]
1	Warren Road	south of Ramona Expressway	67.9	67.9	0.0	No
2	Warren Road	north of Cottonwood Avenue	69.4	69.4	0.0	No
3	Warren Road	south of Cottonwood Avenue	68.2	68.2	0.0	No
4	Warren Road	north of Esplanade Avenue	68.5	68.5	-0.1	No
5	Warren Road	south of Esplanade Avenue	69.6	69.6	-0.1	No
6	Warren Road	north of Devonshire Avenue	69.7	69.7	-0.1	No
7	Warren Road	south of Devonshire Avenue	68.7	68.7	0.0	No
8	Warren Road	north of Florida Avenue (SR-74)	68.7	69.0	0.3	No
9	Warren Road	between Florida Avenue (SR-74) and Auto Boulevard	69.7	70.0	0.3	No
10	Warren Road	south of Auto Boulevard	69.7	69.6	0.0	No
11	Warren Road	north of Stetson Avenue	69.5	69.5	0.0	No
12	Warren Road	south of Stetson Avenue	67.0	67.0	0.0	No
13	Warren Road	north of Mustang Way	67.3	67.2	0.0	No
14	Warren Road	south of Mustang Way	67.2	67.1	0.0	No
15	Warren Road	east of Simpson Road	57.6	58.3	0.8	No
16	Warren Road	between Simpson Road and Domenigoni Parkway	66.0	66.0	0.0	No
17	Myers Street	between Devonshire Avenue and Driveway 8	58.9	60.4	1.5	No
18	Myers Street	between Driveway 8 and Driveway 9	58.9	60.6	1.8	No
19	Myers Street	between Driveway 9 and Driveway 10	61.2	61.1	-0.1	No
20	Myers Street	between Driveway 10 and Driveway 11	61.2	63.2	1.9	No
21	Myers Street	between Driveway 11 and Florida Avenue (SR-74)	61.2	63.3	2.1	No
22	Myers Street	south of Florida Avenue (SR-74)	62.0	62.0	0.0	No
23	Cawston Avenue	south of Menlo Avenue	64.4	64.3	-0.1	No
24	Cawston Avenue	north of Devonshire Avenue	64.6	64.6	0.0	No
25	Cawston Avenue	south of Acacia Avenue	66.5	66.5	0.0	No
26	Sanderson Avenue	between Fruitvale Avenue and Menlo Avenue	68.3	68.2	0.0	No
27	Sanderson Avenue	between Florida Avenue (SR-74) and Acacia Avenue	67.2	67.2	0.0	No
28	Sanderson Avenue	between Acacia Avenue and Whittier Avenue	68.0	68.0	0.0	No
29	Sanderson Avenue	between Whittier Avenue and Wentworth Drive	68.0	68.0	0.0	No
30	Sanderson Avenue	between Wentworth Drive and Tanya Avenue	67.4	67.7	0.2	No
31	Sanderson Avenue	between Tanya Avenue and Stetson Avenue	67.8	67.8	0.0	No

Table IV.L-15
General Plan Buildout (Post-2035) Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 feet (dBA) No Project	With Project	Project Addition	Potential Significant Impact? [1]
32	Ramona Expressway	west of Warren Road	84.5	84.5	0.0	No
33	Menlo Avenue	east of Cawston Avenue	61.3	61.2	-0.1	No
34	Menlo Avenue	west of Sanderson Avenue	61.1	61.0	-0.1	No
35	Devonshire Avenue	west of Warren Road	64.3	64.2	-0.1	No
36	Devonshire Avenue	east of Warren Road	63.7	65.0	1.3	No
37	Devonshire Avenue	west of Old Warren Road	64.0	65.2	1.2	No
38	Devonshire Avenue	between Old Warren Road and Driveway 3	63.4	64.6	1.2	No
39	Devonshire Avenue	between Driveway 3 and Driveway 6	63.4	64.3	0.8	No
40	Devonshire Avenue	between Driveway 6 and Myers Street	63.4	64.3	0.9	No
41	Devonshire Avenue	east of Myers Street	62.5	63.5	1.0	No
42	Devonshire Avenue	west of Cawston Avenue	64.7	64.7	-0.1	No
43	Devonshire Avenue	east of Cawston Avenue	63.4	63.3	-0.1	No
44	Devonshire Avenue	west of Sanderson Avenue	65.5	65.5	0.0	No
45	Devonshire Avenue	east of Sanderson Avenue	64.9	64.8	0.0	No
46	Devonshire Avenue	west of Kirby Street	61.7	61.6	0.0	No
47	Florida Avenue (SR-74)	west of Juniper Flats Road	72.3	72.3	0.0	No
48	Florida Avenue (SR-74)	east of Juniper Flats Road	72.4	72.4	0.0	No
49	Florida Avenue (SR-74)	west of Winchester Road (SR-79)	72.6	72.6	0.0	No
50	Florida Avenue (SR-74)	east of Winchester Road (SR-79)	72.5	72.5	0.0	No
51	Florida Avenue (SR-74)	west of Four Seasons Boulevard	72.5	72.5	0.0	No
52	Florida Avenue (SR-74)	between Four Seasons Boulevard and California Avenue	72.3	72.3	0.0	No
53	Florida Avenue (SR-74)	east of California Avenue	72.2	72.2	0.0	No
54	Florida Avenue (SR-74)	west of Warren Road	72.2	72.2	0.0	No
55	Florida Avenue (SR-74)	between Warren Road and Driveway 2	73.4	73.7	0.3	No
56	Florida Avenue (SR-74)	between Driveway 2 and Driveway 4	73.4	73.7	0.3	No
57	Florida Avenue (SR-74)	between Driveway 4 and Driveway 7	73.3	73.5	0.2	No
58	Florida Avenue (SR-74)	between Driveway 7 and Myers Street	73.3	73.5	0.2	No
59	Florida Avenue (SR-74)	east of Myers Street	72.2	72.6	0.5	No
60	Florida Avenue (SR-74)	west of Acacia Avenue	72.2	72.1	-0.1	No
61	Florida Avenue (SR-74)	between Acacia Avenue and Cawston Avenue	71.8	71.8	0.0	No
62	Florida Avenue (SR-74)	east of Cawston Avenue	68.2	68.2	-0.1	No
63	Florida Avenue (SR-74)	west of Sanderson Avenue	68.2	68.2	-0.1	No
64	Florida Avenue (SR-74)	east of Sanderson Avenue	67.4	67.3	-0.1	No
65	Florida Avenue (SR-74)	west of Kirby Street	67.4	67.3	0.0	No
66	Florida Avenue (SR-74)	east of Kirby Street	68.0	67.5	-0.5	No
67	Florida Avenue (SR-74)	west of Gilmore Street	67.5	67.5	0.0	No
68	Florida Avenue (SR-74)	east of Gilmore Street	67.5	67.4	-0.1	No
69	Florida Avenue (SR-74)	west of Lyon Avenue	67.5	67.5	0.0	No
70	Florida Avenue (SR-74)	east of Lyon Avenue	66.6	66.6	0.0	No
71	Florida Avenue (SR-74)	west of Palm Avenue	67.2	67.1	0.0	No
72	Acacia Avenue	between Florida Avenue (SR-74) and Cawston Avenue	59.6	59.5	-0.2	No

Table IV.L-15
General Plan Buildout (Post-2035) Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 feet (dBA) No Project	With Project	Project Addition	Potential Significant Impact? [1]
73	Acacia Avenue	west of Sanderson Avenue	62.3	62.3	0.0	No

[1] A significant impact occurs when the noise level exceeds 65 dBA CNEL and the project generates a noise level increase of greater than 3.0 dBA.
Table prepared by Urban Crossroads, May 2013.

L-2: The construction contactor shall locate equipment staging in areas that would create the greatest distance between construction-related noise sources and noise sensitive receptors nearest he Project site during all Project construction.

L-3: The construction contactor shall limit haul truck deliveries to the same hours specified for construction equipment. Haul routes shall not pass sensitive land uses or residential dwellings.

On-Site Traffic Noise

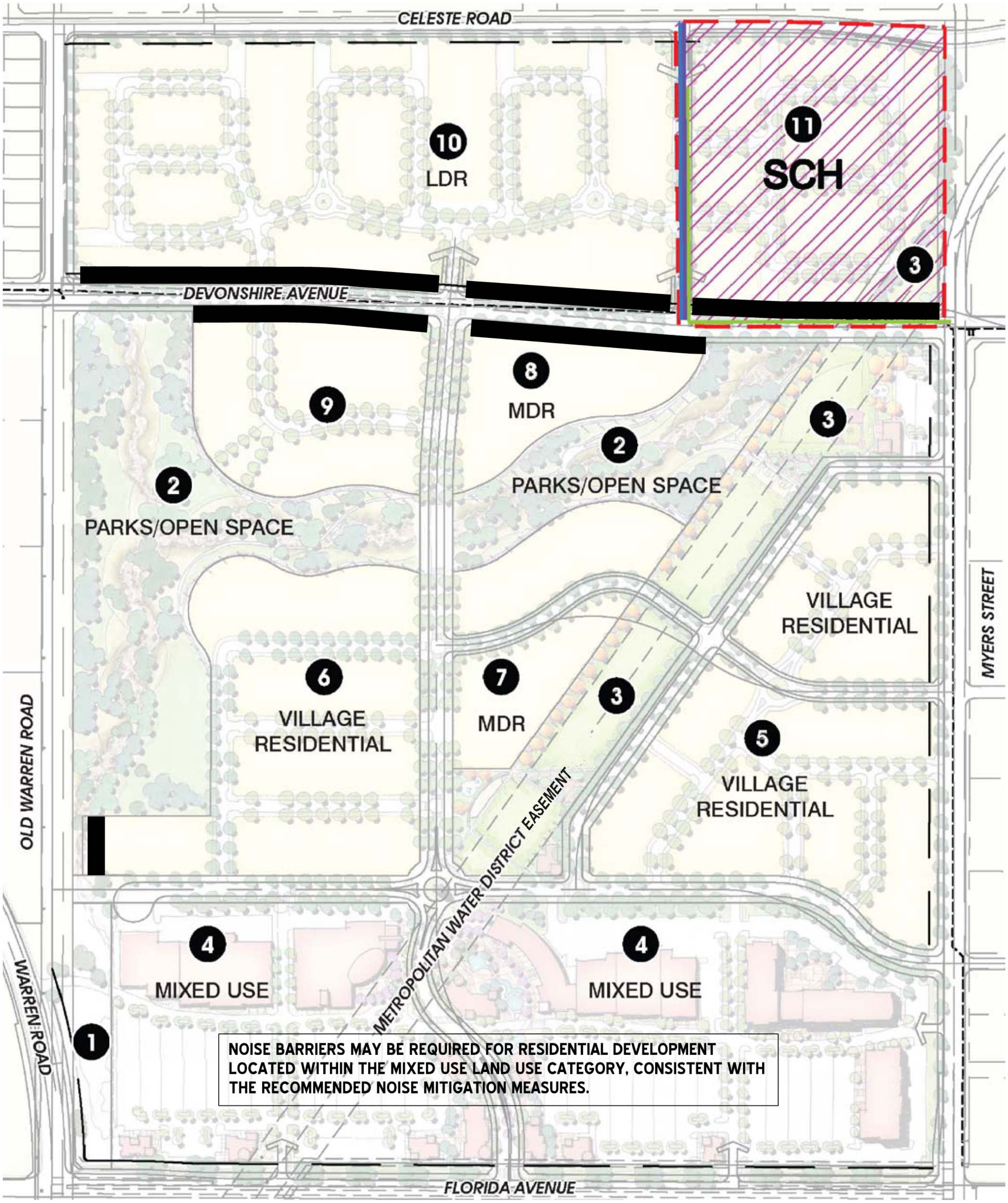
Because residents of the Project could be exposed to noise levels above 65 dBA associated with traffic, the following mitigation measures are required:

L-4: To satisfy the City of Hemet's 65 dBA CNEL exterior noise level standard for noise-sensitive residential land uses, a 6.0-foot high noise barrier shall be constructed at the following locations within the Project site (see also Figure IV.L-3):

- Lots facing Warren Road, north of Florida Avenue, in Planning Area 5.
- Lots facing Myers Street, between Driveway 10 and Florida Avenue, in Planning Area 3.
- Lots facing Devonshire Avenue, between Old Warren Road and Driveway 3, in Planning Areas 8 and 9.
- Lots facing Devonshire Avenue, between Driveway 3 and Driveway 6, in Planning Areas 7 and 9.
- Lots facing Devonshire Avenue, between Driveway 6 and Myers Street, in Planning Area 10.

The noise barrier must weigh at least 4.0 pounds per square foot of face area and have no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The noise barrier may be constructed using one of the following alternative materials:

- Masonry block.
- Stucco veneer over wood framing (or foam core), or 1-inch thick tongue and groove wood of sufficient weight per square foot.



LEGEND:

= RECOMMENDED 6.0-FOOT HIGH SOUND WALL

Source: Urban Crossroads, 2013.

Not to Scale

CAJA Environmental Services, LLC

Figure IV.L-3
Noise Barrier Locations

- Glass (1/4-inch thick), or other transparent material with sufficient weight per square foot.
- Earthen berm.
- Any combination of these construction materials.

The barrier must present a solid face from top to bottom. Unnecessary openings or decorative cutouts should not be made. All gaps (except for weep holes) should be filled with grout or caulking.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measures L-1 through L-3 would reduce the Project's construction noise impacts to less than significant.

The Project's impacts with respect to groundborne vibration during construction would be less than significant.

Implementation of Mitigation Measure L-4 would ensure that on-site traffic noise levels remain below the City of Hemet's 65 dBA CNEL exterior noise standard, and therefore impacts would be less than significant. Impacts with respect to off-site traffic noise would also be less than significant.

The Project's operational noise impacts would be less than significant.