

APPENDIX E
Noise Analysis



Noise Analysis for Amendments to the City of Chula Vista General Plan (GPA-09-01) and Otay Ranch General Development Plan (PCM-09-11)

Prepared for

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A handwritten signature in black ink that reads "Jessica Fleming". The signature is written in a cursive, flowing style.

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1.0 Introduction

The purpose of this report is to determine the potential noise impacts that could occur as a result of the adoption of the proposed General Plan Amendment (GPA) and Otay Ranch General Development Plan Amendment (GDPA), and, if there is a significant impact, what measures are needed to mitigate that effect.

The City of Chula Vista's General Plan Update (GPU) was approved and the 2005 GPU/General Development Plan Environmental Impact Report (GDP EIR) certified in December 2005. The GPU presented a long-term strategy to address planning issues for the growth and development of the City of Chula Vista (City) outlining the community's vision for the future through land use designations, goals, and policies. Although the 2005 GPU/GDP EIR addressed the entire City, the City Council did not approve land use designation changes for an area referred to as the "Deferral Area." Existing land use designations within the Deferral Area are therefore subject to pre-2005 GPU designations in accordance with the 2001 GDP including the Land Use Change Area.

The 2005 GPU/GDP EIR concluded that traffic increases resulting from implementation of the 2005 GPU Preferred Plan could result in noise increases for receivers adjacent to affected roadways. This report supplements the analysis included in the 2005 GPU/GDP EIR with respect to the potential noise effects that could result from implementation of the Proposed Project as compared to analysis in the 2005 GPU/GDP EIR. Specifically, the supplemental analysis herein looks at whether noise levels anticipated from the Proposed Project differ from those evaluated in the 2005 GPU/GDP EIR and provides a breakdown of potential impacts resulting from the proposed land use plan.

A significant noise impact would occur if adoption of the Proposed Project would result in the exposure of people to excessive noise or result in the generation of excessive noise. For the analysis, a significant direct impact was identified if the proposed land use designations result in noise exposures that conflict with the policies in the General Plan or if a proposed land use would potentially create noise levels in excess of the City's Municipal Code. A significant cumulative impact was identified if the incremental noise increase of the Proposed Project would be considered considerable when viewed in connection with the effect of past, current, and probable future projects. This analysis examines future noise levels due to traffic on SR-125, La Media Road, Heritage Road, Main Street, and Eastlake Parkway, aircraft traffic from Brown Field, and potential on-site sources. An additional Existing + Project scenario was analyzed based on project buildout with full buildout traffic volumes added to existing traffic, infrastructure and land uses.

This report also evaluates the adequacy of the policies in the General Plan to avoid any identified impacts.

The Proposed Project location is in the south central portion of the Otay Ranch General Development Plan (GDP) area in the eastern portion of the City of Chula Vista. Figure 1 shows the regional location of the Proposed Project. Figure 2 shows an aerial photograph of the project and vicinity. The Project Area is composed of 1,200 acres and is delineated by the red dotted line in Figure 3.

The Land Use Change Area is delineated by a blue outline in Figure 3. The Land Use Change Area comprises multiple existing villages and planning areas as follows:

- Portions of Villages 4 and 7;
- Village 8;
- Village 9; and
- An 85-acre RTP located within Planning Area 10.

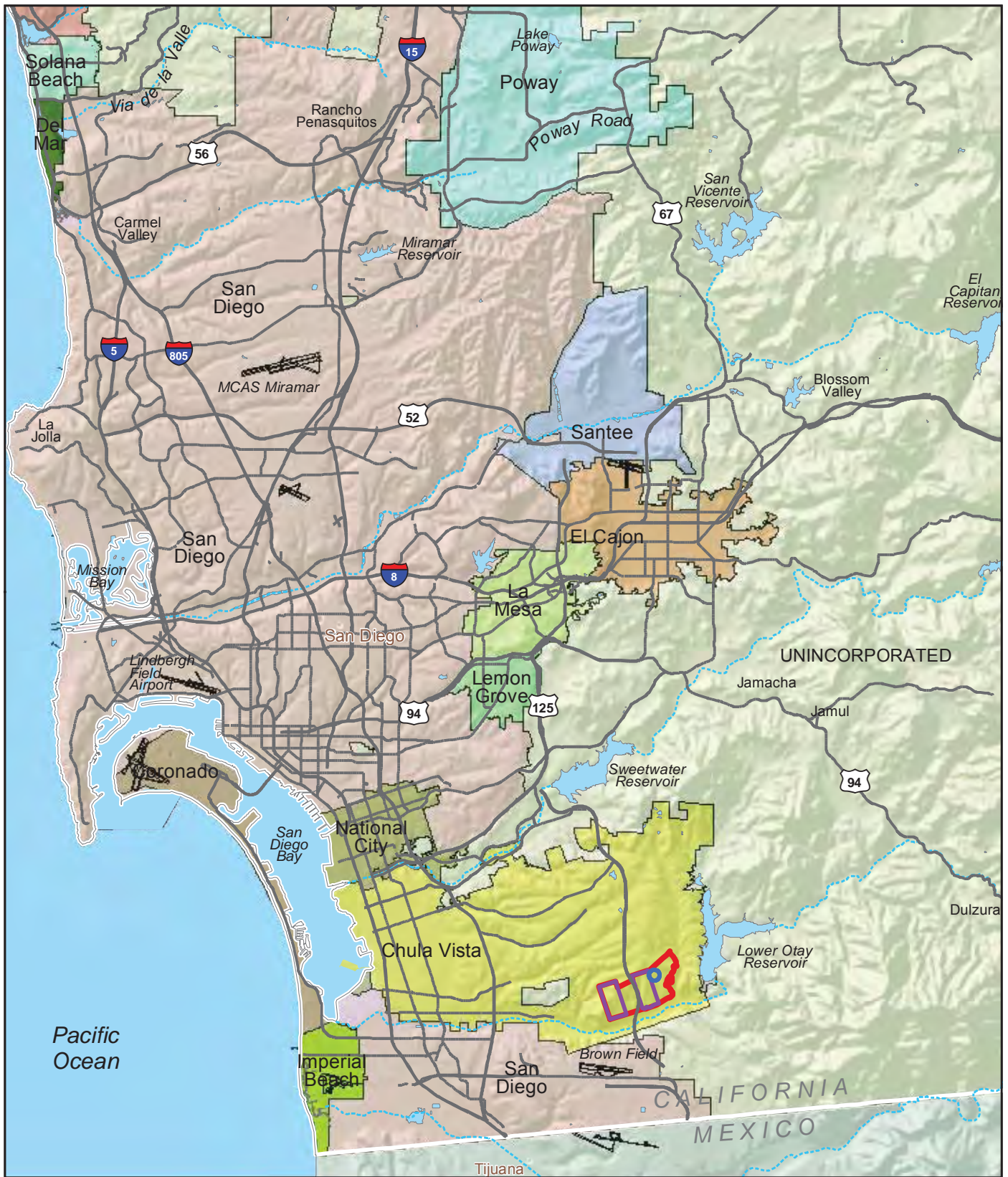
It is noted that the Project Area includes Village 8 East; however, this proposed village is not part of the Proposed Project's Land Use Change Area. Figure 3 provides an illustration of the land uses analyzed in the 2005 GPU/GDP EIR for the Land Use Change Area, and Figure 4 shows the Proposed Project's land use plan.

In December 2005 the City's GPU was approved and the associated EIR certified. The GPU presented a long-term strategy to address planning issues for the growth and development of the City outlining the community's vision for the future through land use designations and goals and policies.

The Proposed Project seeks to amend General Plan and Otay Ranch GDP goals and policies, along with the Circulation Plan-East for the entire Project Area. In addition, the Proposed Project would modify the land use designations within the Land Use Change Area.

The Proposed Project seeks to maintain consistency with the General Plan through the provision of walkable neighborhoods and vibrant town centers. The primary goals and objectives of the Proposed Project are as follows:

- Encourage social interaction and a diverse range of services to promote a mix of uses within a village atmosphere.
- Foster the goal of the General Plan to expand the local economy by providing a broad range of business, employment and housing opportunities that support an excellent standard of living, and improve the ability for residents to live and work locally.



- Project Area
- Village 8 West and Village 9
- RTP



FIGURE 1
Regional Location






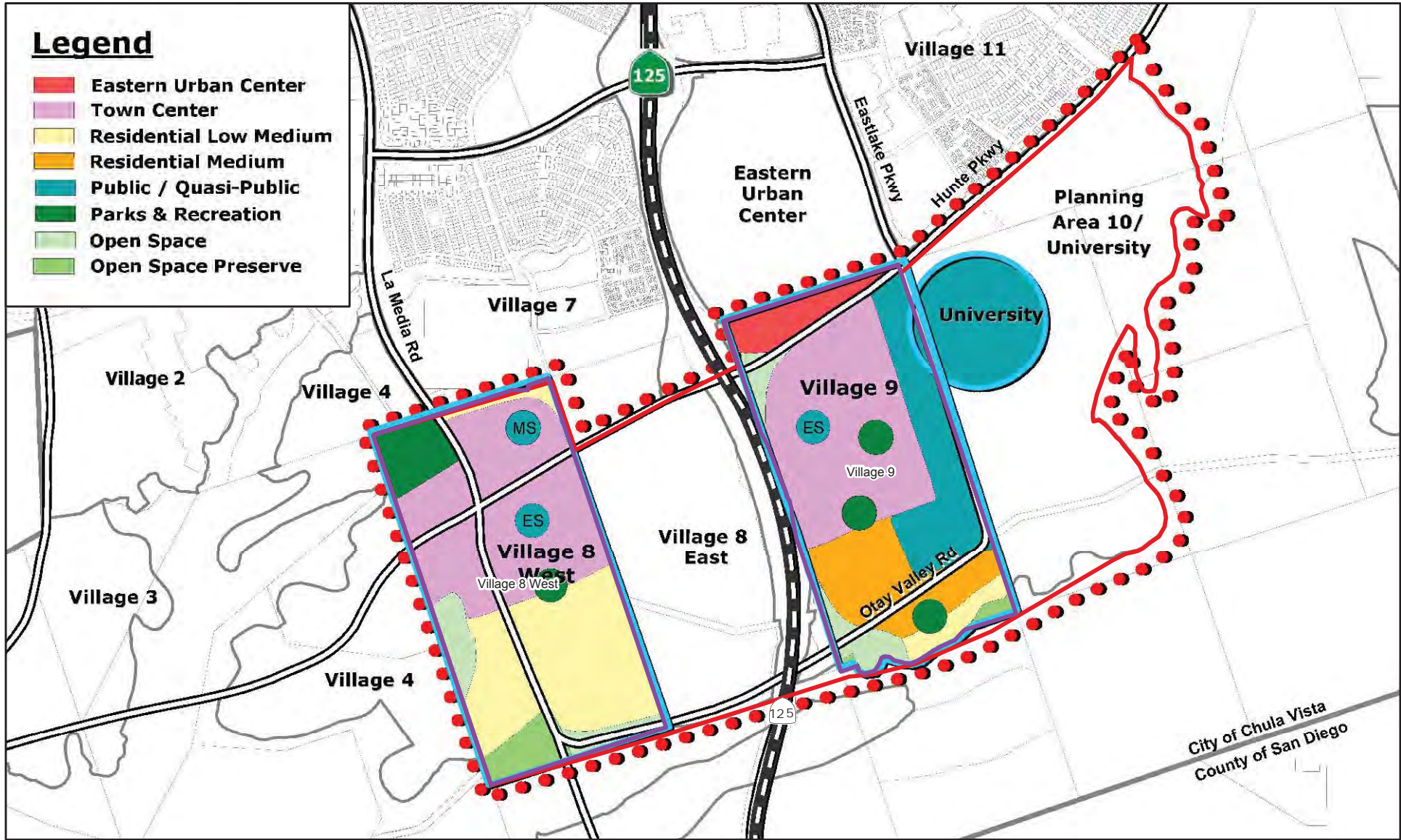
-  Project Area
-  Village 8 West and Village 9
-  RTP



FIGURE 2
Aerial Photograph of the Project Area and Vicinity



Legend

- Eastern Urban Center
- Town Center
- Residential Low Medium
- Residential Medium
- Public / Quasi-Public
- Parks & Recreation
- Open Space
- Open Space Preserve

- Project Boundary
- Village 8 West and Village 9



City of Chula Vista
County of San Diego

FIGURE 3
Land Uses Analyzed in 2005 GPU/GDP EIR

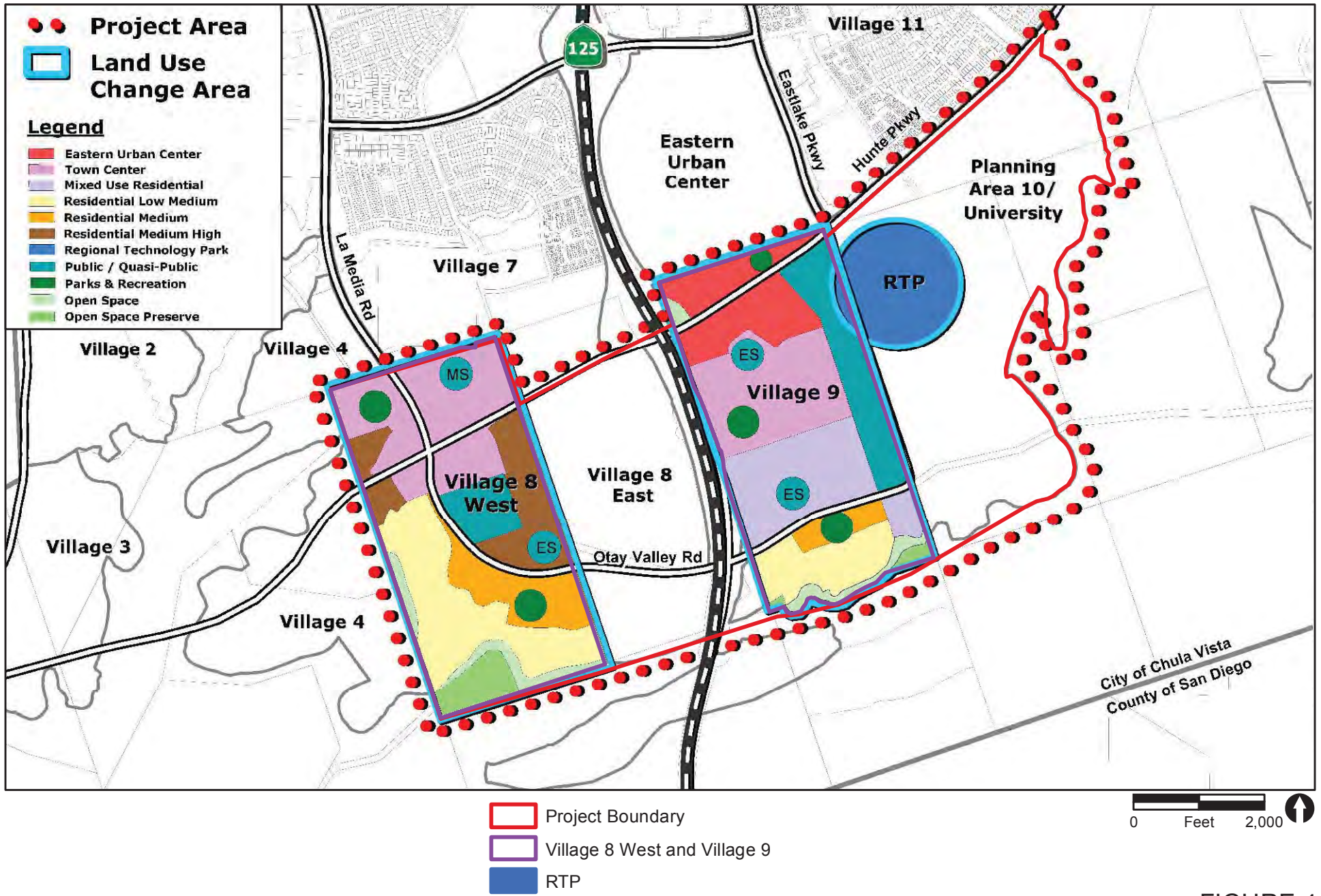


FIGURE 4
 Proposed Land Uses

- Create Town Center within newly defined boundaries for Village 8 West and Village 9, as encouraged by the GPU's emphasis on providing a mix of diverse land uses that meets community needs.
- Develop a circulation plan that de-emphasizes the automobile, and places greater reliance on mass transit and pedestrian circulation.
- Target higher density and higher intensity development into specific focus areas in order to protect stable residential neighborhoods and to create mixed-use urban environments that are oriented to transit and pedestrian activity. This targeted development will be well designed, compatible with adjacent areas, and contribute to the continued vitality of the City's economy.
- Allow for higher density residential development in order to encourage the development of off-campus student housing within the University Town Center adjacent to the University.
- Provide opportunities for higher density development that accommodates off-site Student and Faculty Housing for the University.
- Provide opportunities for goods and services and other ancillary uses necessary to support the University and RTP to be provided within the University.
- Provide access to, and connections between, the City's open space and trails network and the regional network, in accordance with the Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan, Chula Vista Greenbelt Master Plan, and Otay Valley Regional Park Concept Plan.
- Conserve the City's sensitive biological and other valuable natural resources.

2.0 Analysis Methodology

2.1 Applicable Standards and Definitions of Terms

2.1.1 Fundamentals of Traffic Noise and Noise Descriptors

Simply stated, noise is unwanted sound. Sound is caused by minute pressure variations in the air—above and below static atmospheric pressure that are sensed by the human ear. The number of these minute pressure variations over time is referred to as the frequency of the sound.

Sound in the ambient environment is composed of a wide range of frequencies. Because the human ear is not equally sensitive at all frequencies, two different noises that have the same sound pressure level (SPL) may be perceived as having different levels of loudness. Therefore, the SPL is not a measure of the loudness of a sound. In order to obtain levels that more closely approximate the perceived loudness of noise by humans, *frequency-weighting* of the sound level is used.

Sound Pressure Level

$$SPL = 10 \log_{10} \left(\frac{p}{p_o} \right)^2$$

Where:

p = the sound pressure of the signal above atmospheric pressure, and

p_o = the reference pressure (standardized at 20 micropascals¹)

¹ A micropascal is a unit of pressure equal to a millionth of a newton per square

The most common frequency-weighting used for assessment of noise in the ambient environment is *A-weighting*. *A-weighting* is a frequency correction that often correlates well with the subjective response of humans to noise. The noise at any given location is a function of the noise produced by the source, the propagation path between the source and the receiver, and the sensitivity of the receiver. To reduce noise levels at a sensitive receiver, the only available techniques are to reduce the noise of the source, to interrupt the propagation path between the source and the receiver, or to increase the distance between the source and the receiver. The propagation path is simply the path that the sound travels between its source and the receiver.

The evaluation of the effects of noise in the City must consider the sound pressure levels to which people will be exposed, the duration of those levels, and the time of day—or

night—at which they occur. While different people will respond differently to any specific situation, overall response is primarily a factor of these three main elements.

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

The CNEL is a 24-hour A-weighted average sound level [dB(A) L_{eq}] from midnight to midnight obtained after the addition of 5 decibels (dB) to sound levels occurring between 7:00 P.M. and 10:00 P.M., and 10 dB to sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

Sound from a small localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level decreases or drops off at a rate of 6 dB(A) for each doubling of the distance (6 dB(A)/DD).

However, highway traffic noise is not a single, stationary point source of sound. The movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The drop-off rate for a line source is 3 dB(A)/DD.

Change in noise levels is perceived as follows: 3 dB(A) barely perceptible, 5 dB(A) readily perceptible, and 10 dB(A) perceived as a doubling or halving of noise.

Impacts to future sensitive receivers were evaluated in relation to the noise level standards promulgated in the City’s General Plan and the Noise Control Ordinance of the City’s Municipal Code.

2.1.2 Standards Applicable to Vehicle Traffic Noise

The City uses the CNEL as the measure for assessing transportation noise impacts with respect to land use planning. Table 1 summarizes the City’s exterior land use-noise compatibility guidelines. These guidelines reflect the levels of noise exposure that are generally considered to be compatible with various land uses. A significant impact would occur as a result of the adoption of the proposed GPA and GDPA if future development projects under the Proposed Project would expose sensitive receptors to noise in excess of the levels specified in Table 1.

**TABLE 1
 EXTERIOR LAND USE/NOISE COMPATIBILITY GUIDELINES**

Land Use	Annual CNEL in Decibels					
	50	55	60	65	70	75
Residential						
Schools, Libraries, Daycare Facilities, Convalescent Homes, Outdoor Use Areas, and Other Similar Uses Considered Noise Sensitive						
Neighborhood Parks, Playgrounds						
Community Parks, Athletic Fields						
Office and Professional						
Places of Worship (excluding outdoor use areas)						
Golf Courses						
Retail and Wholesale Commercial, Restaurants, Movie Theaters						
Industrial, Manufacturing						

SOURCE: Table 9-2 of the City of Chula Vista General Plan (2005).

Title 24 of the California Code of Regulations further specifies that for multi-family residences if the exterior noise level exceeds 60 CNEL, an acoustical analysis shall demonstrate that the design would achieve the prescribed interior noise standard of 45 CNEL.

2.1.3 Standards Applicable to Aircraft Traffic Noise

A significant impact would occur as a result of the adoption of the proposed GPA and GDPA if future development projects under the Proposed Project would expose sensitive receptors to noise in excess of the land use compatibility noise levels established in the 2010 Brown Field Airport Land Use Compatibility Plan (ALUCP).

2.1.4 Standards Applicable to On-Site Generated Noise

Section 19.689 of the Noise Control Ordinance contains the maximum permissible sound level that can be produced by a noise generator at a receiving property boundary. These performance standards generally apply to stationary sources of noise (i.e., noise sources other than transportation related). Table 2 shows the exterior noise limits of the Noise Control Ordinance. These levels are applied to both environmental and nuisance noise sources, as defined by the ordinance. A significant impact would occur as a result of the adoption of the proposed GPA and GDPA if future development projects under the Proposed Project would generate noise levels in excess of the noise limits specified in Table 2.

**TABLE 2
 EXTERIOR NOISE LIMITS**

Receiving Land Use Category	Noise Level [dB(A)]	
	10 P.M. to 7 A.M. (Weekdays)	7 A.M. to 10 P.M. (Weekdays)
	10 P.M. to 8 A.M. (Weekends)	8 A.M. to 10 P.M. (Weekends)
All residential (except multiple dwelling)	45	55
Multiple dwelling residential	50	60
Commercial	60	65
Light industry – I-R and I-L zone	70	70
Heavy industry – I zone	80	80

NOTES:

I-R = Research Industrial Zone; I-L = Limited Industrial Zone; I = General Industrial Zone

Environmental Noise – L_{eq} in any hour.

Nuisance Noise – Not to be exceeded any time.

2.2 Existing Noise Level Measurements

To assess the potential impacts of noise resulting from increased traffic and to obtain existing ambient conditions, noise measurements were taken throughout the vicinity of the Project Site on June 16, 2010. Noise measurements were taken with one Larson-Davis Model 720 Type 2 Integrating Sound Level Meter, serial number 0262, 0266. The following parameters were used:

Filter: A-weighted
 Response: Fast
 Time History Period: 5 seconds




The meter was calibrated prior to the day’s measurements. Fifteen-minute ground-floor measurements (5 feet above the ground) were taken at seven locations throughout the vicinity of the Project Site. Noise measurement locations are shown in Figure 5.

2.3 Vehicle Traffic Noise Analysis

2.3.1 Traffic Parameters

Traffic noise occurs adjacent to roadways and is directly related to the traffic volume, speed, and mix of vehicles. The following is a discussion of the traffic parameters that were used in the analysis of Existing + Project conditions as well as future buildout traffic conditions.



-  Project Boundary
-  Village 8 West and Village 9
-  RTP


 Noise Measurement Locations



FIGURE 5
Noise Measurement Locations

2.3.1.1 Existing + Project Traffic Parameters

The Existing + Project study scenario is based on the assumption that the Proposed Project would be fully built out immediately and the corresponding full buildout traffic volumes would be added to existing roadway volumes and infrastructure. Thus, this analysis presumes the existing traffic volumes, existing infrastructure, and existing land uses plus full buildout of the Proposed Project. A long-range development such as the Proposed Project is not anticipated to reach full buildout until after year 2030. However, this Existing + Project analysis is provided for informational purposes.

Existing + Project traffic volumes and speeds were obtained from the traffic study prepared for the Proposed Project (LLG 2012). Traffic mix data were based on typical mix data for area roadways. The traffic mix for I-805 was 93.0 percent cars, 4.3 percent medium trucks, and 2.7 percent heavy trucks, and the traffic mix for the existing portion of SR-905 was 91.9 percent cars, 5.5 percent medium trucks, and 2.6 percent heavy trucks. These traffic mixes were obtained from the California Department of Transportation (Caltrans) truck traffic counts (Caltrans 2008). For other area roadways, a standard conservative traffic mix of 95 percent cars, 3 percent medium trucks, and 2 percent heavy trucks was assumed. Table 3 summarizes the Existing + Project vehicle traffic parameters.

The traffic distribution for projecting the future noise contours was assumed to be 77 percent daytime, 10 percent evening, and 13 percent nighttime. With this distribution, the CNEL is approximately 2 dB greater than a noise level for an average daytime hour.

2.3.1.2 Future Traffic Parameters

The Project Area would be exposed to future traffic noise from SR-125 and current and proposed alignments of La Media Road, Main Street, Heritage Road, and Eastlake Parkway. Future traffic volumes for these roads were obtained from the traffic study prepared for the Proposed Project (LLG 2012). Speeds for traffic on each roadway were obtained from the traffic study, and were assumed for the traffic noise projections.

Traffic mix data was based on typical mix data for area roadways. The traffic mix for SR-125 was 95.6 percent cars, 3.2 percent medium trucks, and 1.2 percent heavy trucks, and was obtained from Caltrans truck traffic counts (Caltrans 2008). For other area roadways, a standard conservative traffic mix of 95 percent cars, 3 percent medium trucks, and 2 percent heavy trucks was assumed. Table 4 summarizes the future vehicle traffic parameters used in this analysis for each roadway segment in the Project Area.

**TABLE 3
EXISTING + PROJECT VEHICLE TRAFFIC PARAMETERS**

Roadway	From	To	Speed (mph)	Traffic Mix (percent)			Existing + Project Traffic Volume
				Cars	Medium Trucks	Heavy Trucks	
Olympic Parkway	I-805	Brandywine Avenue	35	95	3	2	63,463
	Brandywine Avenue	Heritage Road/Paseo Ranchero	50	95	3	2	69,785
	Heritage Road/Paseo Ranchero	La Media Road	50	95	3	2	84,383
	La Media Road	SR-125	50	95	3	2	53,712
	SR-125	Eastlake Parkway	50	95	3	2	50,181
	Eastlake Parkway	Hunte Parkway	50	95	3	2	20,895
	Hunte Parkway	Wueste Road	45	95	3	2	5,915
Birch Road	La Media Road	SR-125	45	95	3	2	46,546
Main Street	I-805	Brandywine Avenue	50	95	3	2	26,831
	Brandywine Avenue	Maxwell Street	50	95	3	2	18,700
Hunte Parkway	Eastlake Parkway	Exploration Falls Drive	45	95	3	2	12,737
	Exploration Falls Drive	Olympic Parkway	45	95	3	2	11,013
Heritage Road	Main Street/Rock Mountain Road	City Boundary	45	95	3	2	10,000
La Media Road	Olympic Parkway	Birch Road	45	95	3	2	56,946
	Birch Road	Main Street/La Media Road Couplet	45	95	3	2	3,585
Eastlake Parkway	Olympic Parkway	Birch Road	40	95	3	2	25,115
	Birch Road	Hunte Parkway	40	95	3	2	46,864
I-805	Olympic Parkway/Orange Avenue	Main Street/Auto Park Drive	65	93.0	4.3	2.7	156,756
	Main Street/Auto Park Drive	Palm Avenue	65	93.0	4.3	2.7	154,756
	Palm Avenue	SR-905	65	93.0	4.3	2.7	115,301
SR-905	I-805	Otay Mesa Road	65	91.9	5.5	2.6	60,000

**TABLE 4
FUTURE VEHICLE TRAFFIC PARAMETERS**

Roadway	From	To	Speed (mph)	Traffic Mix (percent)			Future Traffic Volume
				Cars	Medium Trucks	Heavy Trucks	
Main Street	I-805	Brandywine Avenue	50	95	3	2	53,000
	Brandywine Avenue	Maxwell Street	50	95	3	2	46,200
	Maxwell Street	Heritage Road	50	95	3	2	40,800
Rock Mountain Road (Main Street)	Heritage Road	La Media Road	50	95	3	2	42,900
	La Media Road	SR-125	50	95	3	2	33,000
	SR-125	Eastlake Parkway	50	95	3	2	38,900
	Eastlake Parkway	Exploration Falls Drive	50	95	3	2	33,900
	Exploration Falls Drive	Olympic Parkway	50	95	3	2	28,000
Heritage Road	Olympic Parkway	Main Street/Rock Mountain Road	45	95	3	2	33,400
	Main Street	Avenida de las Vistas	45	95	3	2	41,700
	Avenida de las Vistas	City Boundary	45	95	3	2	40,000
	City Boundary	Datsun Street/Otay Valley Road	45	95	3	2	25,600
	Datsun Street/Otay Valley Road	Otay Mesa Road	45	95	3	2	32,200
La Media Road	Olympic Parkway	Birch Road	45	95	3	2	26,300
	Birch Road	Main Street/Rock Mountain Road	45	95	3	2	15,700
	Main Street/Rock Mountain Road	Otay Valley Road	45	95	3	2	25,400
Otay Valley Road	La Media Road	SR-125	45	95	3	2	24,700
	SR-125	Otay Villa Road	45	95	3	2	35,900
	Otay Villa Road	Eastlake Parkway	45	95	3	2	13,600
Eastlake Parkway	Otay Valley Road	Hunte Parkway	40	95	3	2	15,500
	Hunte Parkway	Birch Road	40	95	3	2	23,000
	Birch Road	Olympic Parkway	40	95	3	2	27,400
SR-125	Olympic Parkway	Birch Road	65	95.6	3.2	1.2	13,400
	Birch Road	Main Street/Rock Mountain Road	65	95.6	3.2	1.2	13,700
	Main Street/Rock Mountain Road	Otay Valley Road	65	95.6	3.2	1.2	23,900
	Otay Valley Road	Lonestar Road	65	95.6	3.2	1.2	57,800
	Lonestar Road	Otay Mesa Road	65	95.6	3.2	1.2	53,400
	Otay Mesa Road	SR-905	65	95.6	3.2	1.2	26,000

The same daytime, evening, and nighttime traffic distribution discussed above was assumed.

2.3.2 Analysis of Traffic Noise

The Federal Highway Administration (FHWA) Noise Prediction Model (1979) algorithms, along with the California Vehicle Noise Emission Levels (Calveno) (Caltrans 1983), were used to calculate distances to noise contours for each roadway. The FHWA model takes into account traffic mix, speed, and volume; roadway gradient; relative distances between sources, barriers, and sensitive receptors; and shielding provided by intervening terrain or structures.

The analysis of the noise environment considered that the topography was flat with no intervening terrain between sensitive land uses and roadways. Because there are no obstructions included in the modeling process, predicted noise levels are higher than would actually occur. In actuality, buildings and other obstructions along the roadways would shield distant receivers from the traffic noise.

2.3.3 Analysis of Direct Versus Cumulative Impacts

The direct impact analysis, referred to as Alternative 3 in the Traffic Impact Analysis prepared for the Proposed Project, considers traffic noise resulting from land uses within proposed Villages 8 West and 9, as well as the proposed RTP located within Planning Area 10/University Site. The noise associated with this scenario also assumes existing traffic conditions within the Project Area (but outside the Land Use Change Area), and existing City traffic conditions outside the project boundary.

The cumulative scenario, referred to as Alternative 7 in the Traffic Impact Analysis prepared for the Proposed Project, considers noise impacts associated with the proposed villages and RTP, as well as foreseeable future land uses within the Project Area (Village 8E and 10), and future City and County traffic conditions outside the project boundary.

2.3.4 Analysis of Existing + Project Impacts

The Existing + Project analysis, also discussed in the Traffic Impact Analysis prepared for the Proposed Project, considers the scenario where the Proposed Project would be fully built out immediately and all corresponding traffic volumes would be added to existing roadway volumes and infrastructure.

3.0 Existing Conditions

Existing noise levels within the city of Chula Vista generally are dominated by traffic-generated noise. Other noise sources in the city include:

- The San Diego Trolley operated by the Metropolitan Transit Development Board;
- The Chula Vista Amphitheater (operates during the summer concert season);
- Aircraft operations associated with Brown Field (located outside the City limits); and
- Operations at the Otay Landfill (located within the City boundaries but operated by the County).

3.1 Vehicle Traffic

The main source of existing and future noise in the Project Area is vehicle traffic on area roadways. The roadways that would affect the Project Area and were examined in this analysis are SR-125, La Media Road, Main Street, Heritage Road, and Eastlake Parkway. Traffic parameters are discussed above in Section 2.3.

As shown in Figure 2, the Project Area is currently vacant land. The project vicinity consists of newly constructed homes and roads. There are currently no roadways through the Project Area. Main Street, La Media Road, Eastlake Parkway, Hunte Parkway, and Otay Valley Road would be extended upon buildout of the Proposed Project.

As part of this analysis, ambient noise conditions were measured in and around the vicinity of the Project Site, referred to as the study area. In order to provide a qualitative assessment of the variability of noise throughout the study area, a series of seven daytime noise measurements that were 15 minutes in duration were made throughout the study area. The measurement locations are shown in Figure 5 and were chosen to obtain existing noise levels at the boundary of the Project Area and to obtain existing noise levels of freeflow traffic on roads that would be constructed within the Project Area. The noise measurement data are contained in Attachment 1.

Measurement 1 was located approximately 85 feet from the center of the intersection of Eastlake Parkway and Hunte Parkway at the northeast corner of proposed Village 9. In the vicinity of the measurement location, the roadways are newly constructed and little traffic was observed. Eastlake Parkway is a six-lane roadway and Hunte Parkway is a six-lane roadway with an additional two dedicated right turn lanes. During the 15-minute measurement period, traffic in the intersection was counted. The average measured noise level was 51.6 dB(A) L_{eq} .

As a part of the Circulation Plan, Eastlake Parkway would be extended south along the eastern edge of proposed Village 9. To obtain existing noise levels of freeflow traffic on Eastlake Parkway, Measurement 2 was located north of the Project Area between Birch Road and Olympic Parkway at approximately 50 feet from the centerline of Eastlake Parkway. In the vicinity of the measurement location, Eastlake Parkway is a six-lane roadway. The dominant source of noise was traffic on Eastlake Parkway. Other noise sources included activities in the shopping center parking lot. During the 15-minute measurement period, traffic on Eastlake Parkway was counted. The average measured noise level was 63.4 dB(A) L_{eq} .

Measurement 3 was located at the dead end of La Media Road on the centerline of the roadway at the northern boundary of proposed Village 8 West. In the vicinity of the measurement location, La Media Road is a six-lane roadway. During the 15-minute measurement period, traffic through the intersection of La Media Road and Santa Luna Street was counted. The average measured noise level was 51.9 dB(A) L_{eq} .

As a part of the Circulation Plan, La Media Road would be extended south through proposed Village 8 West. To obtain existing noise levels of freeflow traffic on La Media Road, Measurement 4 was located north of the Project Area between Birch Road and Santa Venetia Street at approximately 60 feet from the centerline of La Media Road. In the vicinity of the measurement location, La Media Road is a six-lane roadway. The dominant source of noise was traffic on La Media Road. During the 15-minute measurement period, traffic on La Media Road was counted. The average measured noise level was 61.9 dB(A) L_{eq} .

Measurement 5 was located north of the Project Area adjacent to SR-125 at approximately 90 feet from the centerline. In the vicinity of the measurement location, SR-125 is a four-lane toll road. The measurement was located at the top of a slope slightly above the elevation of the roadway. There is an approximately 5-foot wall located between SR-125 and the residences to the west. The noise meter was located on the west side of the wall with the microphone above the wall. During the 15-minute measurement period, traffic on SR-125 was counted. The average measured noise level was 65.9 dB(A) L_{eq} . This measured noise level was low because of the distance from the centerline and the low traffic volume on the freeway.

Measurement 6 was located west of the Project Area adjacent to Heritage Road at approximately 40 feet from the centerline. The dominant source of noise was traffic on Heritage Road. During the 15-minute measurement period, traffic on Heritage Road was counted. The average measured noise level was 74.1 dB(A) L_{eq} .

As a part of the Circulation Plan, Main Street would be extended east through the Project Area. To obtain existing noise levels of freeflow traffic on Main Street, Measurement 7 was located west of the Project Area between Nirvana Avenue and Heritage Road at approximately 45 feet from the centerline of Main Street. The dominant

source of noise was traffic on Main Street. During the 15-minute measurement period, traffic on Main Street was counted. The average measured noise level was 73.7 dB(A) L_{eq} .

Table 5 presents the results of the noise measurements and traffic counts.

**TABLE 5
 NOISE MEASUREMENT RESULTS**

Measure- ment	Location	15-Minute Traffic Counts					Measured Noise Level
		Cars	Motor- cycles	Buses	Medium Trucks	Heavy Trucks	
1	Eastlake Parkway/ Hunte Parkway	11	0	0	0	0	51.6
2	Eastlake Parkway	109	0	1	3	0	63.4
3	La Media Road	5	0	0	0	0	51.9
4	La Media Road	112	1	0	0	1	61.9
5	SR-125	94	0	0	4	4	65.9
6	Heritage Road	143	1	0	8	8	74.1
7	Main Street	184	1	0	11	12	73.7

As previously stated, the Project Area is currently vacant with no through roadways. Measurements 1 and 3 are the most characteristic of the current ambient noise environment on site. The following is a brief discussion of the noise characteristics of the area surrounding the Project Area. This is discussed because the future noise environment on the Project Area would be similar to the noise environment in the surrounding area. As indicated, existing noise levels in the vicinity of the project are primarily due to traffic on area roadways but are also composed of other sources

3.2 Air Traffic

The primary sources of aircraft noise in the vicinity of the study area would be due to aircraft operations associated with Brown Field located within the City of San Diego south of the Project Area. The ALUCP for Brown Field identifies land uses compatible with annual noise levels due to aircraft operations. These land use compatibility noise levels are to be used in determining whether a proposed land use is consistent with ALUCP policies and guidelines.

Although the Brown Field ALUCP was revised in 2010, the Proposed Project is not subject to the 2010 Brown Field ALUCP. A previous compatibility review was performed during the preparation of the City's General Plan Update in 2005. The General Plan Update Environmental Impact Report concluded that implementation of the General Plan Update would not expose people working or residing within the General Plan Update area to excessive noise levels from Brown Field because the 65 dBA contour associated

with the airport does not impact any portion of the General Plan Update area. The Proposed Project changes land use designations as compared to those analyzed in the environmental document. However, pursuant to the San Diego County Regional Airport Authority, the previous compatibility review under the 2004 ALUCP is adequate and no further review of the GPA is required under the 2004 ALUCP.

Noise levels due to operations at the other airfields generally do not impact the Project Area.

3.3 Other Sources of Noise

Other sources of noise within the Project Area are due to the normal activities associated with a given land use. For example, within residential areas noise sources may include dogs, landscaping activities, and parties. Commercial uses may include car washes, fast food restaurants, and auto repair facilities.

4.0 Existing + Project Scenario

As discussed above, this analysis presumes the existing traffic volumes, existing infrastructure, and existing land uses plus full buildout of the Proposed Project. Existing + Project traffic parameters are summarized in Table 3. The methods used in the analysis are described in the Analysis Methodology section of this report.

Table 6 summarizes the Existing and the Existing + Project distances to the 60, 65, 70, 75, and 80 CNEL noise contours. Distances to the noise contours assume a hard, flat site with no intervening barriers or obstructions. Existing noise contours are shown in Figure 6. Existing + Project noise contours are shown in Figure 7.

As shown in Figure 6, uses located closest to the circulation element roadways are currently exposed to noise levels in excess of 65 CNEL. As shown in Figure 7, adding project traffic to existing traffic volumes would result in a slight increase in noise levels.

Table 7 summarizes the change in noise levels that would result from adding project traffic to existing traffic volumes. An increase of 3 dB is considered a perceptible increase in noise to the human ear. As shown, the following roadway segments would experience more than a 3-dB noise increase:

**TABLE 6
EXISTING VERSUS
EXISTING + PROJECT NOISE CONTOUR DISTANCES**

Roadway	From	To	Existing Distance to (feet)					Existing + Project Distance to (feet)				
			80 CNEL	75 CNEL	70 CNEL	65 CNEL	60 CNEL	80 CNEL	75 CNEL	70 CNEL	65 CNEL	60 CNEL
Olympic Parkway	I-805	Brandywine Avenue	-	-	116	366	1,124	-	-	156	494	1,419
	Brandywine Avenue	Heritage Road/Paseo Ranchero	-	82	259	820	2,030	-	117	371	1,138	2,426
	Heritage Road/Paseo Ranchero	La Media Road	-	85	269	850	2,069	-	142	449	1,320	2,648
	La Media Road	SR-125	-	73	232	734	1,891	-	90	286	904	2,135
	SR-125	Eastlake Parkway	-	68	216	682	1,795	-	84	267	845	2,062
	Eastlake Parkway	Hunte Parkway	-	-	74	234	740	-	-	111	352	1,090
	Hunte Parkway	Wueste Road	-	-	116	366	1,124	-	-	-	78	248
Birch Road	La Media Road	SR-125	-	-	-	135	428	-	62	195	618	1,673
Main Street	I-805	Brandywine Avenue	-	-	141	444	1,309	-	-	143	452	1,325
	Brandywine Avenue	Maxwell Street	-	-	100	315	995	-	-	100	315	995
Hunte Parkway	Eastlake Parkway	Exploration Falls Drive	-	-	-	-	-	-	-	53	169	534
	Exploration Falls Drive	Olympic Parkway	-	-	-	-	-	-	-	-	146	462
Heritage Road	Main Street/Rock Mountain Road	City Boundary	-	-	-	133	420	-	-	-	133	420
La Media Road	Olympic Parkway	Birch Road	-	-	-	146	462	-	76	239	756	1,929
	Birch Road	Main Street/La Media Road Couplet	-	-	-	13	42	-	-	-	-	150
Eastlake Parkway	Olympic Parkway	Birch Road	-	-	-	122	386	-	-	82	258	816
	Birch Road	Hunte Parkway	-	-	-	17	55	-	-	152	481	1,391
I-805	Olympic Parkway/Orange Avenue	Main Street/Auto Park Drive	162	512	1,457	2,806	4,353	168	532	1,498	2,852	4,407
	Main Street/Auto Park Drive	Palm Avenue	160	505	1,443	2,790	4,333	166	525	1,484	2,836	4,388
	Palm Avenue	SR-905	121	383	1,166	2,461	3,940	124	391	1,185	2,484	3,968
SR-905	I-805	Otay Mesa Road	66	208	657	1,749	3,119	66	208	657	1,749	3,119

NOTE: Distances less than 50 feet not reported.

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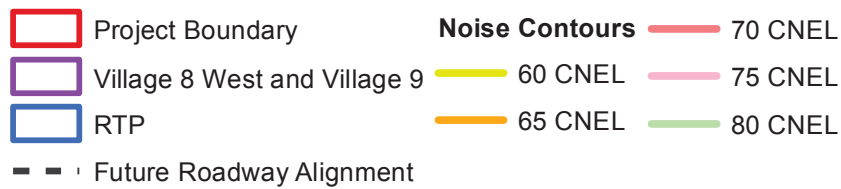
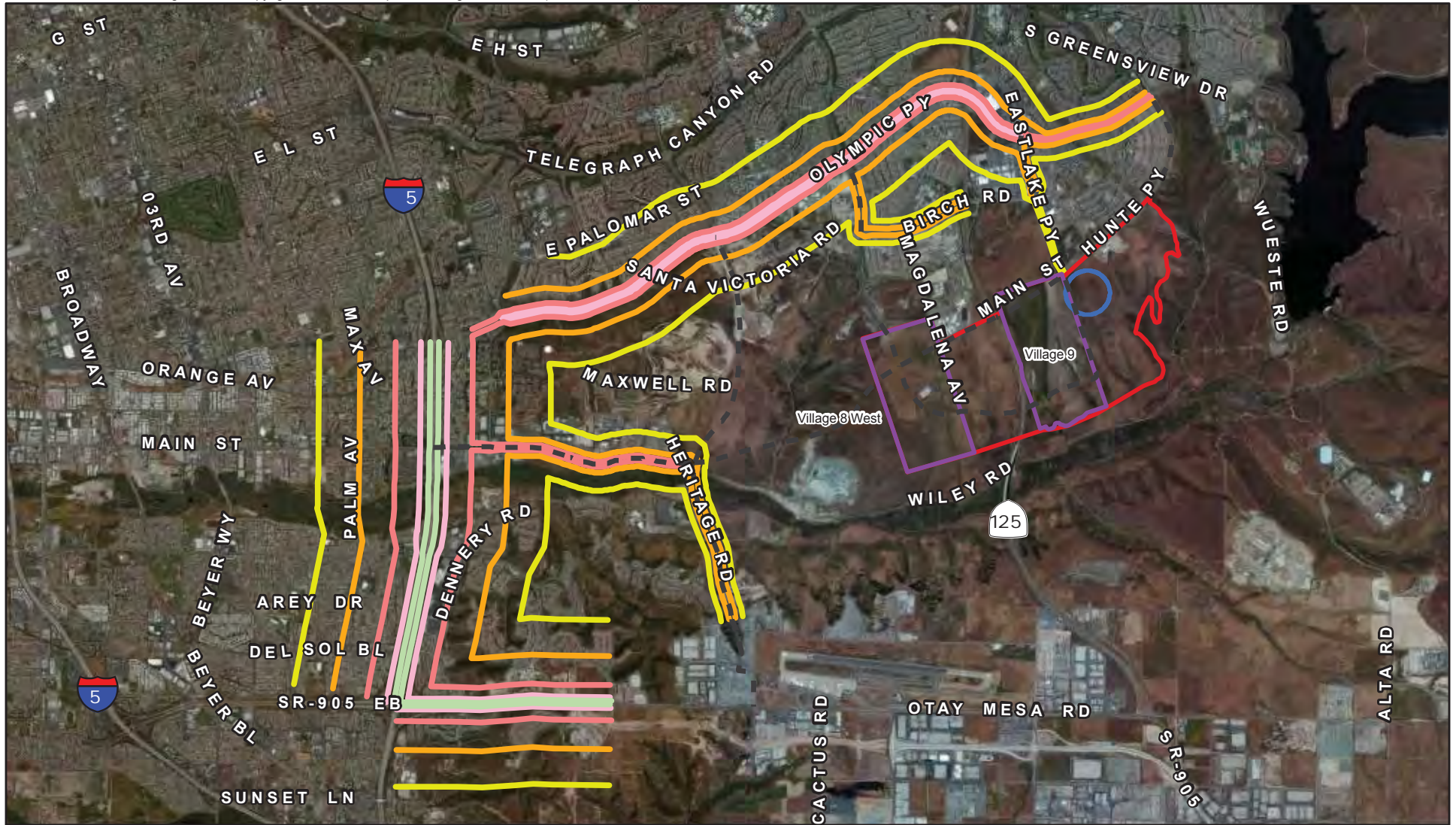


FIGURE 6
Existing Flat-Site Roadway Contours

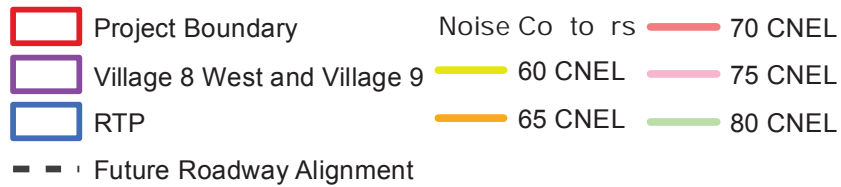
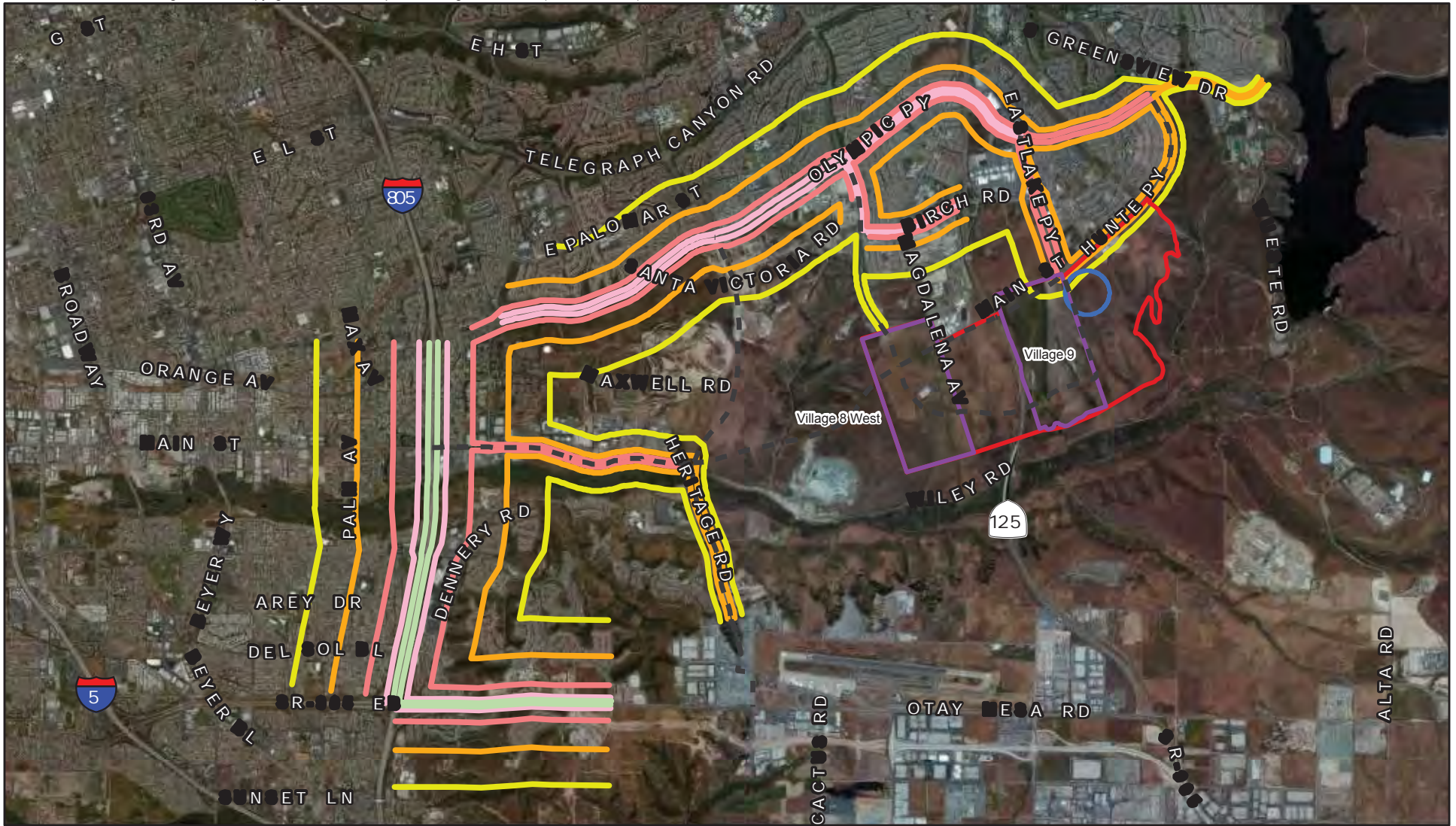


FIGURE 7
Existing + Project Flat-Site Roadway Contours

**TABLE 7
EXISTING VERSUS EXISTING + PROJECT NOISE INCREASES**

Roadway	From	To	Existing Volume	Existing + Project Volume	Noise Increase [dB(A)]
Olympic Parkway	I-805	Brandywine Avenue	47,000	63,463	1.3
	Brandywine Avenue	Heritage Road/Paseo Ranchero	48,700	69,785	1.6
	Heritage Road/Paseo Ranchero	La Media Road	50,500	84,383	2.2
	La Media Road	SR-125	43,600	53,712	0.9
	SR-125	Eastlake Parkway	40,500	50,181	0.9
	Eastlake Parkway	Hunte Parkway	13,900	20,895	1.8
	Hunte Parkway	Wueste Road	Na	5,915	Na
Birch Road	La Media Road	SR-125	10,200	46,546	6.6*
Main Street	I-805	Brandywine Avenue	26,400	26,831	0.1
	Brandywine Avenue	Maxwell Street	18,700	18,700	0.0
Hunte Parkway	Eastlake Parkway	Exploration Falls Drive	700	12,737	12.6*
	Exploration Falls Drive	Olympic Parkway	800	11,013	11.4*
Heritage Road	Main Street/Rock Mountain Road	City Boundary	10,000	10,000	0.0
La Media Road	Olympic Parkway	Birch Road	11,000	56,946	7.1*
	Birch Road	Main Street/La Media Road Couplet	1,000	3,585	5.5*
Eastlake Parkway	Olympic Parkway	Birch Road	9,200	25,115	4.4*
	Birch Road	Hunte Parkway	1,300	46,864	15.6*
I-805	Olympic Parkway/Orange Avenue	Main Street/Auto Park Drive	151,000	156,756	0.2
	Main Street/Auto Park Drive	Palm Avenue	149,000	154,756	0.2
	Palm Avenue	SR-905	113,000	115,301	0.1
SR-905	I-805	Otay Mesa Road	60,000	60,000	0.0

Na = Not Available

Bold = Exceeds 3 dB

*Residential developments constructed adjacent to these segments have been designed according to General Plan policies (including policy EE21, discussed below, and the noise limits shown in Table 2), and noise barriers have been constructed

- Birch Road between La Media Road and SR-125
- Hunte Parkway between Eastlake Parkway and Olympic Parkway
- La Media Road between Olympic Parkway and Main Street/La Media Road Couplet
- Eastlake Parkway between Olympic Parkway and Hunte Parkway

There are existing residential, commercial, and school uses located adjacent to these roadway segments. However, the residential and school developments constructed adjacent to these segments have been designed according to General Plan policies (including policy E 21, discussed below, and the noise limits shown in Table 2), and noise barriers have been constructed to ensure that noise levels do not exceed 65 CNEL. Impacts at these existing uses are less than significant.

A discussion of the worst-case future conditions is provided below.

5.0 Future Acoustical Environment and Impacts

5.1 Vehicle Traffic: Direct Impacts

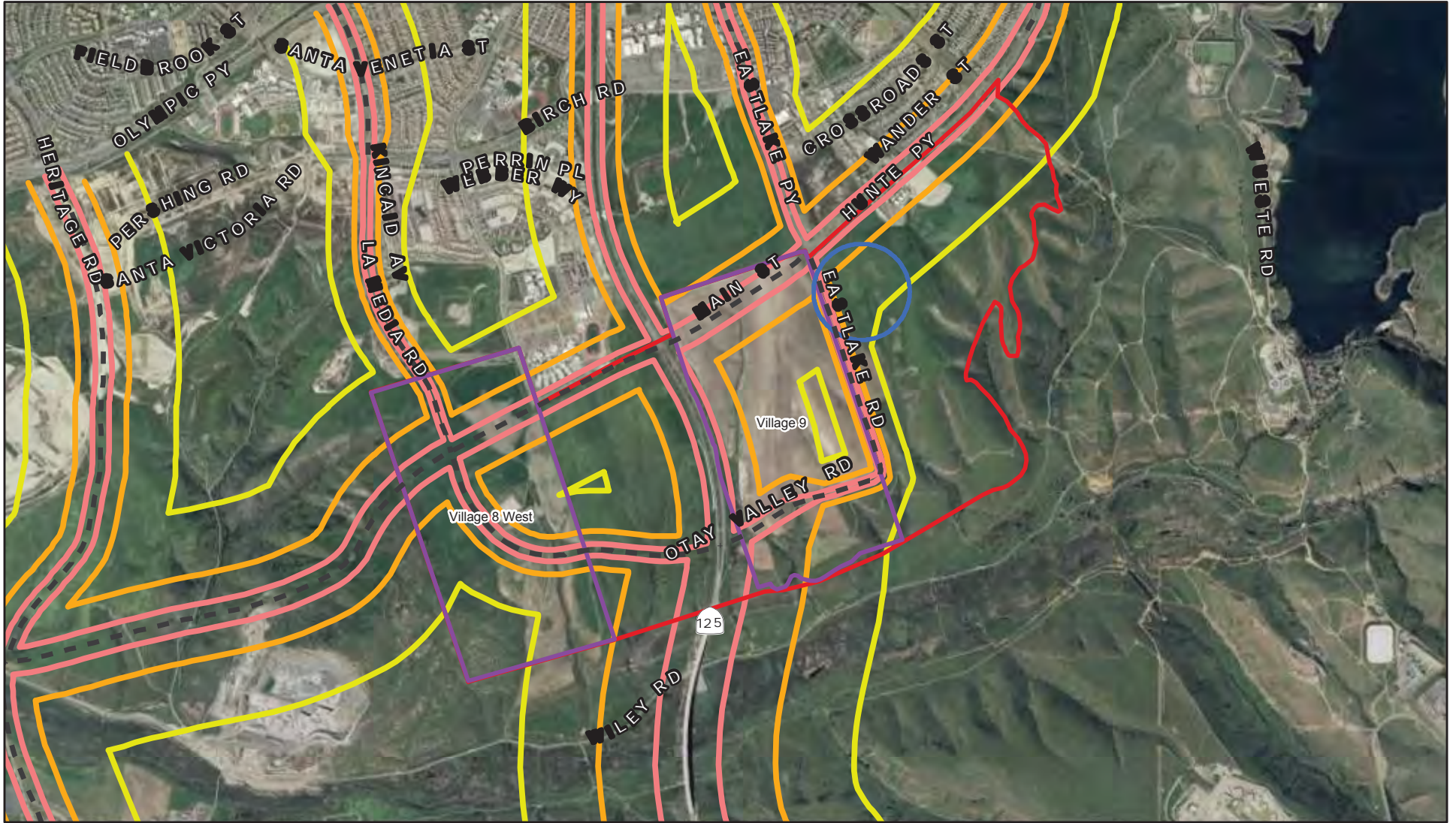
The methods used in the analysis of future conditions are described in the Analysis Methodology section of this report. Future traffic parameters used are shown in Table 4.

Buildout of the Proposed Project would result in distances to the 60, 65, and 70 CNEL noise contours as shown in Table 8. Distances to the noise contours assume a hard, flat site with no intervening barriers or obstructions. Future noise contours for the Proposed Project would be indistinguishable from those established for the 2005 GPU land use plan and are shown in Figure 8. A comparison of the acoustical differences between the 2005 GPU Preferred Plan and the proposed land use plan are discussed in Section 5.3, below.

It should be noted that at any specific location the actual existing noise would depend upon not only the source noise, but the nature of the path from the source to the sensitive receptor. Buildings, walls, and other barriers would reduce the direct line-of-sight noise levels. For the existing noise contours, the first row of buildings (where they exist) would reduce road noise to sensitive receptors placed behind those structures. It should also be noted that each individual project would require subsequent review.

**TABLE 8
PROPOSED PROJECT BUILDOUT NOISE CONTOUR DISTANCES**

Roadway	From	To	Distance to (feet)		
			70 CNEL	65 CNEL	60 CNEL
Main Street	I-805	Brandywine Avenue	282	892	2,120
	Brandywine Avenue	Maxwell Street	246	778	1,968
	Maxwell Street	Heritage Road	217	687	1,805
Rock Mountain Road (Main Street)	Heritage Road	La Media Road	228	722	1,869
	La Media Road	SR-125	176	555	1,548
	SR-125	Eastlake Parkway	207	655	1,744
	Eastlake Parkway	Exploration Falls Drive	180	571	1,579
	Exploration Falls Drive	Olympic Parkway	149	471	1,369
Heritage Road	Olympic Parkway	Main Street/Rock Mountain Road	140	443	1,306
	Main Street	Avenida de las Vistas	175	553	1,544
	Avenida de las Vistas	City Boundary	168	531	1,497
	City Boundary	Datsun Street/Otay Valley Road	107	340	1,060
	Datsun Street/Otay Valley Road	Otay Mesa Road	135	427	1,270
La Media Road	Olympic Parkway	Birch Road	110	349	1,083
	Birch Road	Main Street/Rock Mountain Road	66	208	659
	Main Street/Rock Mountain Road	Otay Valley Road	107	337	1,053
Otay Valley Road	La Media Road	SR-125	104	328	1,029
	SR-125	Otay Villa Road	151	476	1,380
	Otay Villa Road	Eastlake Parkway	57	180	571
Eastlake Parkway	Otay Valley Road	Hunte Parkway	50	159	503
	Hunte Parkway	Birch Road	75	236	747
	Birch Road	Olympic Parkway	89	281	890
SR-125	Olympic Parkway	Birch Road	127	401	1,209
	Birch Road	Main Street/Rock Mountain Road	130	410	1,230
	Main Street/Rock Mountain Road	Otay Valley Road	226	716	1,858
	Otay Valley Road	Lonestar Road	547	1,532	2,888
	Lonestar Road	Otay Mesa Road	506	1,444	2,791
	Otay Mesa Road	SR-905	246	779	1,970










- | | | | |
|---|------------------------------|---|----------------|
|  | Project Boundary |  | Noise Contours |
|  | Village 8 West and Village 9 |  | 60 CNEL |
|  | RTP |  | 65 CNEL |
|  | Future Roadway Alignment | | 70 CNEL |



FIGURE 8
Future Flat-Site Roadway Contours

As shown in Figure 8, uses located closest to the circulation element roadways would be exposed to noise levels in excess of 65 CNEL. Unobstructed noise levels exceed 60 CNEL across most of the Project Area. The Proposed Project includes residential, school, commercial, mixed use, and park uses. Pursuant to City guidelines (see Table 1), a significant impact would occur if residential, school, or park receptors were exposed to roadway noise in excess of 65 CNEL, if office or professional uses were exposed to roadway noise in excess of 70 CNEL, or if retail, wholesale commercial, or restaurant receptors were exposed to roadway noise levels in excess of 75 CNEL.

Based on the land use plans for the Proposed Project, there are residential and mixed uses (which may include residential components), school sites and park areas located within the distances indicated in the 65 CNEL column of Table 8. These areas are shown in Figure 9. Should future residential, school, or park receptors be located within these areas there could be potentially significant impacts resulting from exposure to noise levels in excess of 65 CNEL.

There are mixed uses (which may include office and professional components) located within the distances indicated in the 70 CNEL column of Table 8. These areas are shown in Figure 10. Should future office and/or professional receptors be located within these areas there could be potentially significant impacts resulting from exposure to noise levels in excess of 70 CNEL. As shown in Figure 8, noise levels would be less than 75 CNEL across the proposed village sites/RTP. Future retail, wholesale commercial, or restaurant receptors that may be constructed in the mixed use areas would not be exposed to noise levels greater than 75 CNEL.

5.2 Vehicle Traffic: Cumulative Impacts

As discussed in Section 2.1.1 above, an increase of 3 decibels is considered a perceptible increase in noise to the human ear. Therefore, a significant cumulative impact could occur to existing receivers adjacent to circulation element roadways where traffic volumes result in noise level increases of more than 3 decibels. Lessening the noise levels in these areas would require a project-level exterior analysis to assess the feasibility of reducing noise levels to outdoor use areas. This level of analysis is infeasible at this stage of the analysis.

A significant cumulative impact would occur if adoption of the Proposed Project, along with past, current, and probable future projects would expose on- or off-site, existing, and planned sensitive receptors to road noise 3 decibels over existing noise levels. As shown in Table 9, when compared to existing traffic volumes, cumulative noise increases of up to 17.6 decibels could be anticipated.

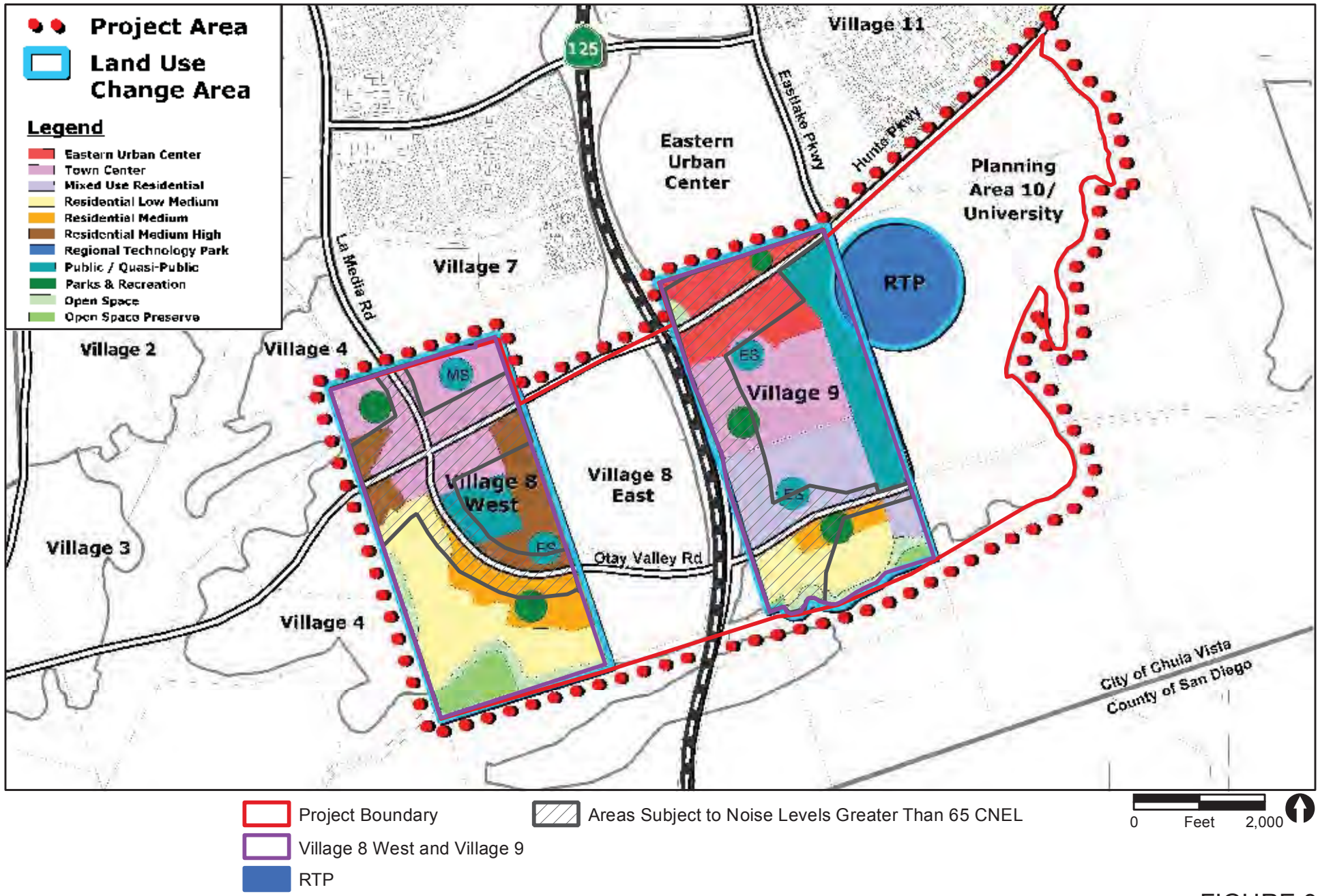


FIGURE 9
 Areas Exceeding 65 CNEL

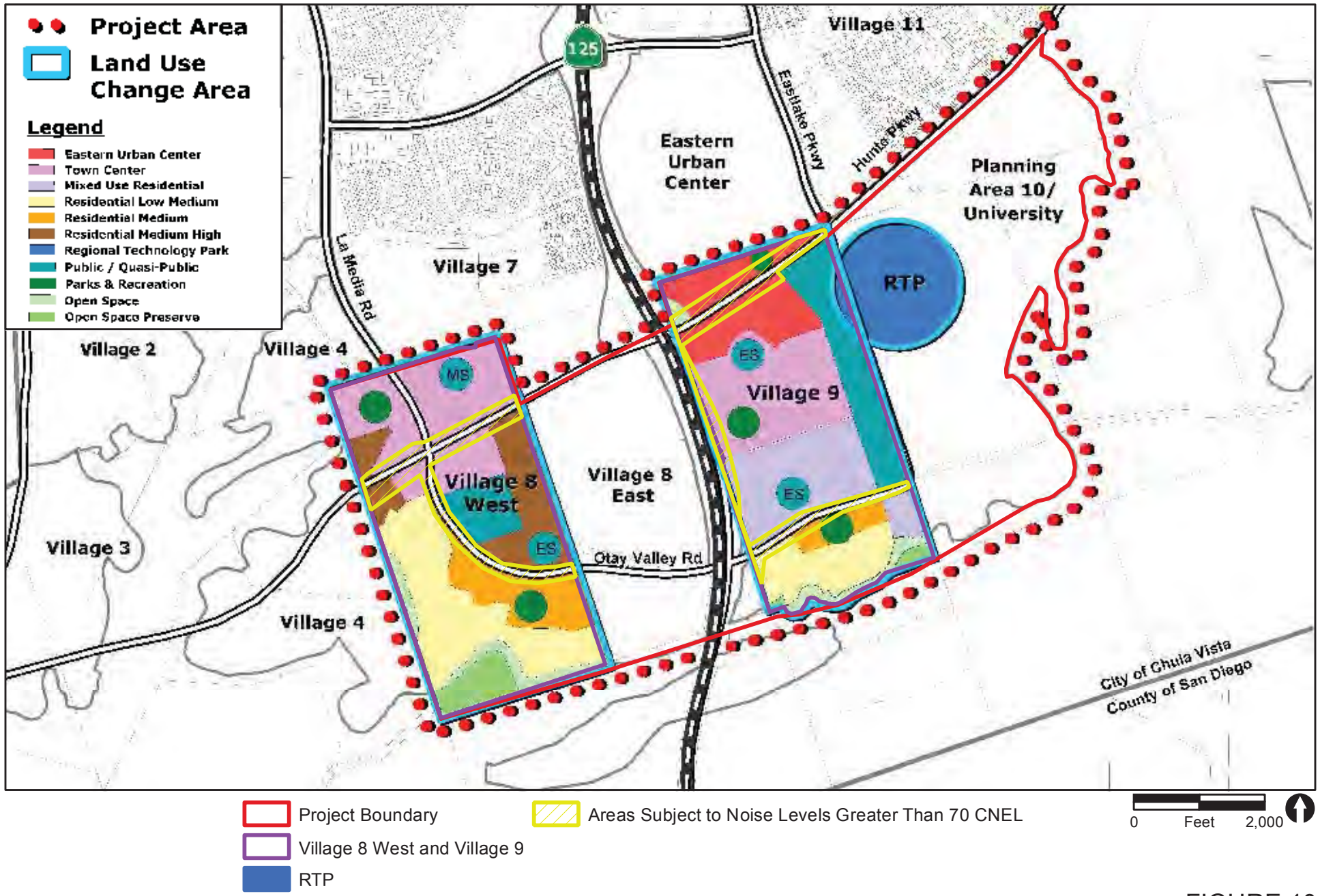


FIGURE 10
 Areas Exceeding 70 CNEL

Of the roadway segments that would experience a cumulative noise increase of 3 decibels or more, there are existing sensitive receptors located adjacent to the following segments:

- Olympic Parkway between Eastlake Parkway and Wueste Road
- Main Street between I-805 and Oleander Avenue
- Hunte Parkway between Eastlake Parkway and Olympic Parkway
- La Media Road between Olympic Parkway and Santa Luna Street
- Eastlake Parkway between Olympic Parkway and Hunte Parkway
- I-805 between Palm Avenue and SR-905
- SR-905 between I-805 and Ocean View Hills Parkway

The residential developments constructed adjacent to these segments have been designed according to General Plan policies (including policy E 21, discussed below, and the noise limits shown in Table 2), and noise barriers have been constructed to ensure that noise levels do not exceed 65 CNEL. Impacts at these existing residences are less than significant. When compared to the future traffic volumes that would occur under the adopted General Plan, the Proposed Project would result in noise increases of up to 10.7 decibels. Of the roadway segments where noise levels would increase by 3 decibels or more (under direct or cumulative conditions), there are existing sensitive receptors located adjacent to SR-125 between Olympic Parkway and the northern project boundary. All other roadway segments that would experience a noise increase of 3 decibels or greater are located in existing industrial use areas and would not affect sensitive receptors.

As discussed above, the residential developments constructed adjacent to this segment have been designed according to General Plan policies (including Objective E 21, discussed below, and the noise limits shown in Table 2), and noise barriers have been constructed to ensure that noise levels do not exceed 65 CNEL. While impacts at these existing locations may be less than significant, absent acoustical studies at future project sites, impacts would remain significant.

5.3 Vehicle Traffic: Proposed Project Compared to 2005 GPU/GDP

The following is an analysis of the future year 2030 traffic noise levels that could result from implementation of the Proposed Project as compared to that analyzed in the 2005 GPU/GDP EIR.

**TABLE 9
CUMULATIVE NOISE INCREASES**

Roadway	From	To	Existing Volume	Future (Year 2030)	Future (Year 2030)	Change in dB – Existing to Proposed Project	Change in dB – Adopted General Plan to Proposed Project
				Volume – Adopted General Plan	Volume – Proposed Project		
Telegraph Canyon Road	I-805	Oleander Avenue	61,900	60,000	59,300	-0.2	-0.1
	Heritage Road	La Media Road	40,300	46,300	47,100	0.7	0.1
Olympic Parkway	I-805	Brandywine Avenue	47,000	50,700	51,300	0.4	0.1
	Brandywine Avenue	Heritage Road/Paseo Ranchero	48,700	33,900	34,800	-1.5	0.1
	Heritage Road/Paseo Ranchero	La Media Road	50,500	31,000	33,300	-1.8	0.3
	La Media Road	SR-125	43,600	42,200	43,900	0.0	0.2
	SR-125	Eastlake Parkway	40,500	50,400	49,400	0.9	-0.1
	Eastlake Parkway	Hunte Parkway	13,900	34,100	34,200	3.9*	0.0
Birch Road	Hunte Parkway	Wueste Road	10,200	27,000	30,100	4.7*	0.5
	La Media Road	SR-125	26,400	22,600	26,200	0.0	0.6
Main Street	SR-125	Eastlake Parkway	18,700	24,700	28,500	1.8	0.6
	I-805	Brandywine Avenue	26,400	54,800	59,300	3.5*	0.3
Rock Mountain Road (Main Street)	Brandywine Avenue	Maxwell Street	18,700	48,800	50,200	4.3*	0.1
	Maxwell Street	Heritage Road	Na	43,000	45,200	-	0.2
	Heritage Road	La Media Road	DNE	45,000	44,900	-	0.0
Hunte Parkway	La Media Road	SR-125	DNE	38,800	33,100	-	-0.7
	La Media Road	SR-125	DNE	50,300	48,400	-	-0.2
	SR-125	Eastlake Parkway	DNE	50,300	48,400	-	-0.2
Otay Valley Road	Eastlake Parkway	Exploration Falls Drive	700	39,400	40,000	17.6*	0.1
	Exploration Falls Drive	Olympic Parkway	800	29,700	31,600	16.0*	0.3
Otay Mesa Road	La Media Road	SR-125	DNE	19,700	31,400	-	2.0
	SR-125	Otay Villa Road	DNE	29,300	33,500	-	0.6
	Otay Villa Road	Eastlake Parkway	DNE	17,000	16,100	-	-0.2
Bonita Road	Otay Mesa Road	Corporate Center Drive	67,000	32,900	48,200	-1.4	1.7
	Corporate Center Drive	Heritage Road	67,500	20,200	32,500	-3.2	2.1
	Heritage Road	Britannia Boulevard	70,900	23,000	45,600	-1.9	3.0
	Britannia Boulevard	La Media Road	71,100	22,800	47,300	-1.8	3.2**
	La Media Road	Piper Ranch Road	59,000	13,500	49,600	-0.8	5.7**
	Piper Ranch Road	SR-125	44,500	12,000	33,200	-1.3	4.4**
	SR-125	Harvest Road	9,700	14,500	39,000	6.0**	4.3**
Sweetwater Road	Central Avenue	San Miguel Road	Na	15,700	16,200	-	0.1
Airway Road	Bonita Road	Park Drive	Na	25,000	25,900	-	0.2
Siempre Vivi Road	Cactus Road	Britannia Boulevard	Na	4,600	25,400	-	7.4**
	Britannia Boulevard	La Media Road	Na	12,200	31,100	-	4.1**
Heritage Road	Cactus Road	Britannia Boulevard	Na	6,900	39,500	-	7.6**
	Britannia Boulevard	La Media Road	Na	4,600	54,100	-	10.7**
	La Media Road	Avenida de la Fuente	Na	6,400	26,300	-	6.1**
	Avenida de la Fuente	SR-905	Na	21,500	50,100	-	3.7**
	Olympic Parkway	Main Street/Rock Mountain Road	DNE	30,300	42,300	-	1.4
La Media Road	Main Street	Avenida de las Vistas	10,000	33,700	61,400	7.9**	2.6
	Avenida de las Vistas	City Boundary	9,800	31,500	60,200	7.9**	2.8
	City Boundary	Datsun Street/Otay Valley Road	4,800	18,000	47,400	9.9**	4.2**
	Datsun Street/Otay Valley Road	Otay Mesa Road	10,000	24,600	52,600	7.2**	3.3**
	Otay Mesa Road	SR-905	Na	9,100	20,800	-	3.6**
	Olympic Parkway	Birch Road	11,000	31,300	28,300	4.1*	-0.4
La Media Road	Birch Road	Main Street/Rock Mountain Road	1,000	23,900	18,000	12.6*	-1.2
	Main Street/Rock Mountain Road	Otay Valley Road	DNE	32,100	27,300	-	-0.7
	Otay Valley Road	Lonestar Road	DNE	44,800	-	-	-
	Lonestar Road	Otay Mesa Road	4,400	32,500	16,400	5.7**	-3.0
	Otay Mesa Road	SR-905	16,500	25,000	37,300	3.5**	1.7

**TABLE 9
CUMULATIVE NOISE INCREASES
(CONTINUED)**

Roadway	From	To	Existing Volume	Future (Year 2030) Volume – Adopted General Plan	Future (Year 2030) Volume – Proposed Project	Change in dB – Existing to Proposed Project	Change in dB – Adopted General Plan to Proposed Project
Eastlake Parkway	Olympic Parkway	Birch Road	9,200	28,800	27,600	4.8*	-0.2
	Birch Road	Hunte Parkway	1,300	22,900	22,800	12.4*	0.0
	Hunte Parkway	Otay Valley Road	DNE	13,900	18,600	-	1.3
Piper Ranch Road	Lonestar Road	Otay Mesa Road	Na	2,900	5,200	-	2.5
I-805	Olympic Parkway/Orange Avenue	Main Street/Auto Park Drive	151,000	238,400	268,000	2.5	0.5
	Main Street/Auto Park Drive	Palm Avenue	149,000	221,000	258,100	2.4	0.7
	Palm Avenue	SR-905	113,000	201,800	236,500	3.2*	0.7
SR-125	Olympic Parkway	Birch Road	Na	11,200	28,100	-	4.0*
	Birch Road	Main Street/Rock Mountain Road	Na	9,900	30,200	-	4.8*
	Main Street/Rock Mountain Road	Otay Valley Road	Na	20,000	46,300	-	3.6*
	Otay Valley Road	Lonestar Road	Na	33,100	90,700	-	4.4*
	Lonestar Road	Otay Mesa Road	Na	44,500	80,600	-	2.6
	Otay Mesa Road	SR-905	Na	30,800	33,700	-	0.4
SR-905	I-805	Ocean View Hills Parkway	60,000	146,500	223,600	5.7*	1.8
	Ocean View Hills Parkway	Heritage Road	Na	134,900	214,900	-	2.0
	Heritage Road	Britannia Boulevard	Na	126,600	197,500	-	1.9
	Britannia Boulevard	La Media Road	Na	118,400	171,400	-	1.6
	La Media Road	SR-125	Na	95,100	133,200	-	1.5

DNE = Does Not Exist
Na = Not Available

*Residential developments constructed adjacent to these segments have been designed according to General Plan policies (including policy EE21, discussed below, and the noise limits shown in Table 2), and noise barriers have been constructed.

**There are no sensitive receptors adjacent to these segments.

Table 10 summarizes the future year 2030 traffic volumes under the 2005 GPU/GDP, the future year 2030 direct traffic volumes under the Proposed Project (Alternative 3 in the Traffic Impact Analysis), the future year 2030 cumulative traffic volumes under the Proposed Project (Alternative 7 in the Traffic Impact Analysis), and the associated differences in noise levels.

As shown in Table 10, buildout of the Proposed Project would result in the following road segments experiencing an increase in traffic of 3 decibels or greater than analyzed in the 2005 GPU/GDP EIR:

Direct Impacts

- Otay Valley Road from La Media Road to SR-125
- Otay Valley Road from SR-125 to Otay Villa Road

Cumulative Impacts

- Otay Valley Road from La Media Road to SR-125
- Otay Valley Road from SR-125 to Otay Villa Road
- Otay Valley Road from Otay Villa Road to Eastlake Parkway
- Heritage Road from Main Street to Avenida de las Vistas
- Heritage Road from Avenidas de las Vistas to City Boundary
- La Media Road from Main Street to Otay Valley Road

5.4 Other Sources of Noise

As discussed above, other sources of noise within the Project Area are due to the normal activities associated with a given land use. Noises from these types of activities are considered normal environmental noises that are expected to occur within these types of land uses. The City's Noise Control Ordinance generally regulates excessive noises resulting from these activities. The Proposed Project includes residential, school, commercial, mixed-use, and park uses. In general, increased commercial land increases the potential that noise producing uses will be developed. Conformance with GP and GDP policies, as well as ordinance compliance assures that potentially significant impacts are less than significant.

6.0 General Plan Policies

A significant noise impact will occur if project approval will result in people being exposed to excessive noise. Table 2 contains the exterior land use-noise compatibility guidelines contained in Section 3.5 of the Environmental Element (E) of the General Plan. These guidelines reflect the levels of noise exposure that are generally considered to be compatible with various types of land use. The element notes that these guidelines are to be used at the land use planning stage, for noise impact assessments, and to determine mitigation requirements for development proposals.

The Proposed Project would amend the land uses within the Land Use Change Area to correspond with the goals and policies contained in the General Plan. There are two objectives in the adopted E that address noise. Both objectives contain specific policies to avoid adverse noise impacts. The policies that have the most important application to avoiding potential noise impacts include those that establish and enforce a noise threshold for future development.

Objective E 21

Protect people from excessive noise through careful land use planning and the incorporation of appropriate mitigation techniques.

Policies

E 21.1: Apply the exterior land use-noise compatibility guidelines contained in Table 9-1 (see Table 2 of this report) of the E to new development where applicable and in light of project-specific considerations.

E 21.2: Where applicable, the assessment and mitigation of interior noise levels shall adhere to the applicable California Building Code with local amendments and other applicable established City standards.

E 21.3: Promote the use of available technologies in building construction to improve noise attenuation capacities.

E 21.4: Continue to implement and enforce the City's noise control ordinance.

**TABLE 10
FUTURE YEAR 2030 TRAFFIC VOLUMES: PROPOSED PROJECT VERSUS 2005 GPU**

Roadway	From	To	Year 2030 Volume – 2005 GPA/GDP	Year 2030 Direct Volume – Proposed Project	Year 2030 Cumulative Volume – Proposed Project	Change in dB – 2005 GPA/GDP to Direct Proposed Project	Change in dB – 2005 GPA/GDP to Cumulative Proposed Project
Telegraph Canyon Road	I-805	Oleander Avenue	70,100	60,200	59,300	-0.7	-0.7
	Heritage Road	La Media Road	36,700	47,400	47,100	1.1	1.1
Olympic Parkway	I-805	Brandywine Avenue	52,500	50,700	51,300	-0.2	-0.1
	Brandywine Avenue	Heritage Road/Paseo Ranchero	49,500	33,900	34,800	-1.6	-1.5
	Heritage Road/Paseo Ranchero	La Media Road	48,700	32,700	33,300	-1.7	-1.7
	La Media Road	SR-125	35,000	43,400	43,900	0.9	1.0
	SR-125	Eastlake Parkway	47,500	49,500	49,400	0.2	0.2
	Eastlake Parkway	Hunte Parkway	25,400	34,100	34,200	1.3	1.3
Birch Road	Hunte Parkway	Wueste Road	Na	26,300	30,100		
	La Media Road	SR-125	32,500	23,800	26,200	-1.4	-0.9
Main Street	SR-125	Eastlake Parkway	29,300	27,400	28,500	-0.3	-0.1
	I-805	Brandywine Avenue	48,400	53,000	59,300	0.4	0.9
	Brandywine Avenue	Maxwell Street	48,400	46,200	50,200	-0.2	0.2
Rock Mountain Road (Main Street)	Maxwell Street	Heritage Road	48,400	40,800	45,200	-0.7	-0.3
	Heritage Road	La Media Road	42,000	42,900	44,900	0.1	0.3
	La Media Road	SR-125	42,600	33,000	33,100	-1.1	-1.1
Hunte Parkway	SR-125	Eastlake Parkway	Na	43,900	48,400	--	--
	Eastlake Parkway	Exploration Falls Drive	26,100	33,900	40,000	1.1	1.9
	Exploration Falls Drive	Olympic Parkway	26,100	28,000	31,600	0.3	0.8
Otay Valley Road	La Media Road	SR-125	4,200	24,700	31,400	7.7	8.7
	SR-125	Otay Villa Road	6,900	30,900	33,500	6.5	6.9
	Otay Villa Road	Eastlake Parkway	6,900	13,600	16,100	2.9	3.7
Otay Mesa Road	Otay Mesa Road	Corporate Center Drive	Na	32,400	48,200	--	--
	Corporate Center Drive	Heritage Road	Na	19,300	32,500	--	--
	Heritage Road	Britannia Boulevard	Na	22,800	45,600	--	--
	Britannia Boulevard	La Media Road	Na	21,000	47,300	--	--
	La Media Road	Piper Ranch Road	Na	14,900	49,600	--	--
	Piper Ranch Road	SR-125	Na	12,700	33,200	--	--
Bonita Road	SR-125	Harvest Road	Na	16,800	39,000	--	--
Sweetwater Road	Central Avenue	San Miguel Road	19,600	15,800	16,200	-0.9	-0.8
Airway Road	Bonita Road	Park Drive	13,700	24,400	25,900	2.5	2.8
	Cactus Road	Britannia Boulevard	Na	5,100	25,400	--	--
Siempre Vivi Road	Britannia Boulevard	La Media Road	Na	13,200	31,100	--	--
	Cactus Road	Britannia Boulevard	Na	7,500	39,500	--	--
	Britannia Boulevard	La Media Road	Na	5,200	54,100	--	--
	La Media Road	Avenida de la Fuente	Na	6,400	26,300	--	--
Heritage Road	Avenida de la Fuente	SR-905	Na	22,300	50,100	--	--
	Olympic Parkway	Main Street/Rock Mountain Road	32,200	33,400	42,300	0.2	1.2
	Main Street	Avenida de las Vistas	29,700	41,700	61,400	1.5	3.2
	Avenida de las Vistas	City Boundary	29,700	40,000	60,200	1.3	3.1
	City Boundary	Datsun Street/Otay Valley Road	Na	25,600	47,400	--	--
	Datsun Street/Otay Valley Road	Otay Mesa Road	Na	32,200	52,600	--	--
La Media Road	Otay Mesa Road	SR-905	Na	10,000	20,800	--	--
	Olympic Parkway	Birch Road	25,100	26,300	28,300	0.2	0.5
	Birch Road	Main Street/Rock Mountain Road	25,100	15,700	18,000	-2.0	-1.4
	Main Street/Rock Mountain Road	Otay Valley Road	13,700	25,400	27,300	2.7	3.0
	Lonestar Road	Otay Mesa Road	Na	20,300	16,400	--	--
	Otay Mesa Road	SR-905	Na	21,900	37,300	--	--

**TABLE 10
FUTURE YEAR 2030 TRAFFIC VOLUMES: PROPOSED PROJECT VERSUS 2005 GPU
(CONTINUED)**

Roadway	From	To	Year 2030 Volume – 2005 GPA/GDP	Year 2030 Direct Volume – Proposed Project	Year 2030 Cumulative Volume – Proposed Project	Change in dB – 2005 GPA/GDP to Direct Proposed Project	Change in dB – 2005 GPA/GDP to Cumulative Proposed Project
Eastlake Parkway	Olympic Parkway	Birch Road	31,400	27,400	27,600	-0.6	-0.6
	Birch Road	Hunte Parkway	31,400	23,000	22,800	-1.4	-1.4
	Hunte Parkway	Otay Valley Road	31,600	15,500	18,600	-3.1	-2.3
Piper Ranch Road	Lonestar Road	Otay Mesa Road	Na	5,300	5,200	--	--
I-805	Olympic Parkway/Orange Avenue	Main Street/Auto Park Drive	243,000	238,000	268,000	-0.1	0.4
	Main Street/Auto Park Drive	Palm Avenue	Na	224,900	258,100	--	--
	Palm Avenue	SR-905	Na	205,400	236,500	--	--
SR-125	Olympic Parkway	Birch Road	56,400	13,400	28,100	-6.2	-3.0
	Birch Road	Main Street/Rock Mountain Road	58,200	13,700	30,200	-6.3	-2.8
	Main Street/Rock Mountain Road	Otay Valley Road	77,100	23,900	46,300	-5.1	-2.2
	Otay Valley Road	Lonestar Road	Na	57,800	90,700	--	--
	Lonestar Road	Otay Mesa Road	Na	53,400	80,600	--	--
	Otay Mesa Road	SR-905	Na	26,000	33,700	--	--
SR-905	I-805	Ocean View Hills Parkway	Na	147,700	223,600	--	--
	Ocean View Hills Parkway	Heritage Road	Na	136,700	214,900	--	--
	Heritage Road	Britannia Boulevard	Na	129,200	197,500	--	--
	Britannia Boulevard	La Media Road	Na	121,800	171,400	--	--
	La Media Road	SR-125	Na	97,900	133,200	--	--

Na = Not Available

Objective E 22

Protect the community from the effects of transportation noise.

Policies

E 22.1: Work to stabilize traffic volumes in residential neighborhoods by limiting throughways and by facilitating the use of alternative routes around, rather than through, neighborhoods.

E 22.2: Explore the feasibility of using new technologies to minimize traffic noise, such as use of rubberized asphalt in road surface materials.

E 22.3: Employ traffic calming measures where appropriate, such as narrow roadways and on-street parking, in commercial and mixed use districts.

E 22.4: Encourage walking, biking, carpooling, use of public transit, and other alternative modes of transportation to minimize vehicular use and associated traffic noise.

E 22.5: Require projects to construct appropriate mitigation measures in order to attenuate existing and projected traffic noise levels in accordance with applicable standards, including the exterior land use-noise compatibility guidelines contained in Table 9-1 of the Environmental Element (see Table 2 of this report).

Both of the proposed General Plan objectives and associated policies identified above address the potential generation of excessive noise. Future development that occurs in conformance to the Proposed Project would not expose people to excessive noise because these policies would require future projects to comply with the exterior land use-noise compatibility guidelines contained in Table 2 (E 21.1). Future development that occurs in conformance to the Proposed Project would promote the use of available technologies in building construction to improve noise attenuation (E 21.4), and assure the continued implementation the City's noise control ordinance (E 21.5).

Future development would also work to stabilize traffic volumes (E 22.1), provide for consideration of feasibility of using new technologies to minimize traffic noise (E 22.2), employ traffic calming measures (E 22.3), and encourage alternative modes of transportation to minimize traffic noise (E 22.4). The Proposed Project also requires project developers to implement appropriate measures in order to attenuate existing and projected traffic noise levels in accordance with applicable standards (E 22.5) and specifies those standards.

7.0 General Development Plan Policies

Part II, Chapter 7 establishes goals to promote a quiet community where residents live without noise which is detrimental to health and enjoyment of property and ensure residents are not adversely affected by noise.

Objective: Otay Ranch shall have a noise abatement program to enforce regulations to control noise.

Policies: Prohibit excessive noises which are a detriment to the health and safety of residents.

- Limit noise at the source, along the path of transmission and/or at the receiver site.
- Reduce the need for noise mitigation through site and land use planning techniques, whenever feasible.
- Consider the effects of noise, especially from transportation, in land use decisions to ensure noise compatibility.
- Comply with applicable noise ordinances and performance standards in zoning ordinances.
- Use the Environmental Review Process to evaluate the effects of noise.
- Regularly review technological developments and building techniques which decrease the project related noise impacts on-site and off-site and specify needed noise mitigation measures.

8.0 Conclusions and Recommendations

8.1 Vehicle Traffic

Figure 11 shows the portions of the Land Use Change Area that would exceed 60 CNEL. Interior noise levels at multi-family residential uses located in these areas have the potential to exceed 45 CNEL. Additionally, as discussed above, residential, school, and park land uses are sited within the 65 CNEL contour for project roadways (see Figure 8). In addition, mixed uses, which may include office and professional components, are sited within the 70 CNEL contour for project roadways (see Figure 9). Future receptors have the potential to be exposed to significant traffic generated noise

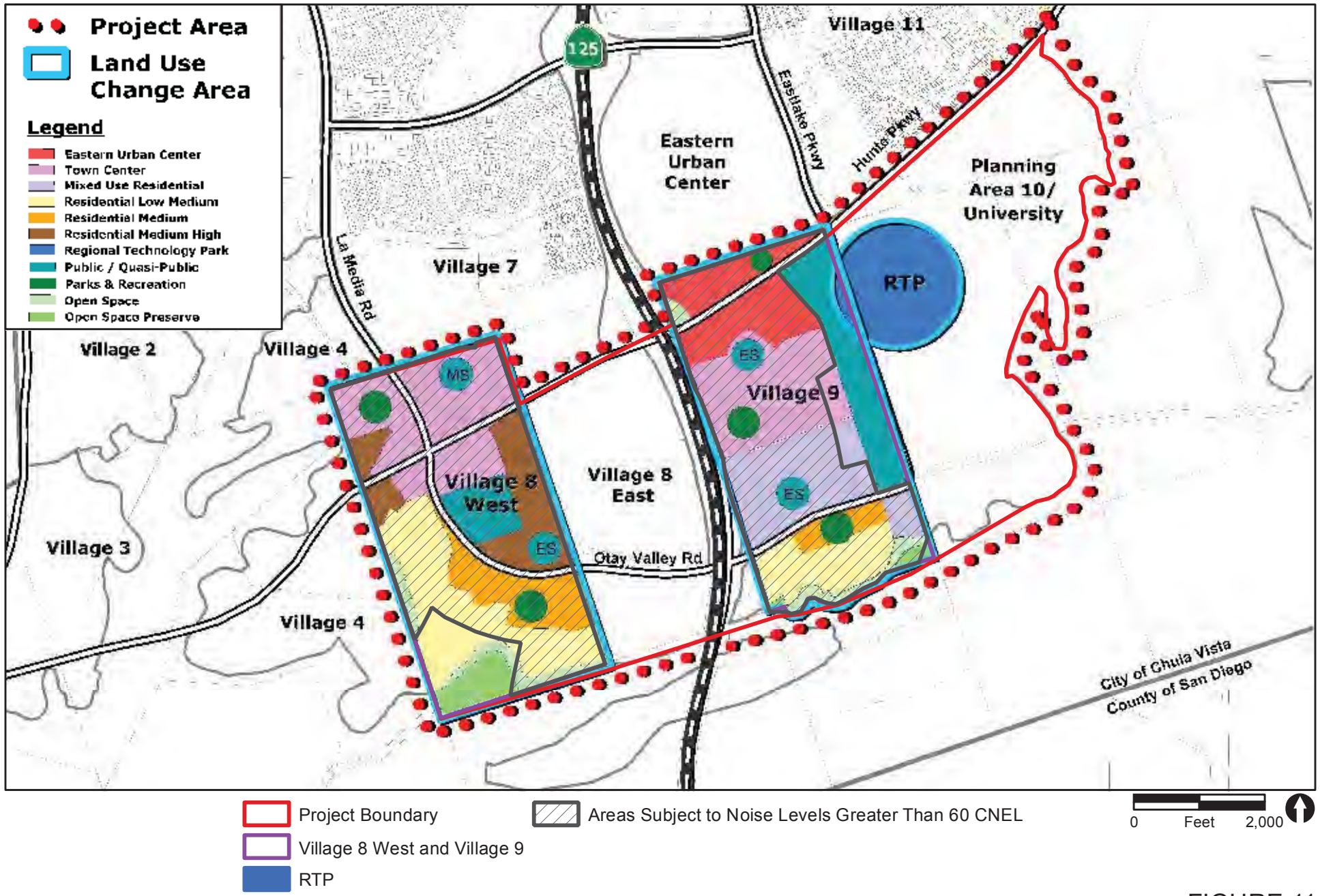


FIGURE 11
 Areas Exceeding 60 CNEL

levels without mitigation. The General Plan contains objectives and policies about the exposure of people to excessive traffic noise. Future projects are required to comply with the exterior land use-noise compatibility guidelines contained in Table 2 (E 21.1). The General Plan also requires project developers to implement appropriate measures in order to attenuate existing and projected traffic noise levels in accordance with applicable standards (E 22.5) and specifies those standards.

Compliance with the appropriate standards in E 22.5 (see Table 2) would serve to reduce impacts from the adoption of the GPA and GDPA. However, a significant direct and/or cumulative impact could occur to existing receivers adjacent to circulation element roadways where traffic volumes are projected to result in noise level increases of more than 3 decibels. Lessening the noise levels in these areas would require a project level exterior analysis to assess the feasibility of reducing noise levels to outdoor use areas. Since this level of analysis is infeasible at this stage of the analysis, impacts remain significant and unmitigated.

8.2 On-site Generated Noise

A significant noise impact would occur if the adoption of the Proposed Project were to result in the generation of excessive noise. Potential noise generators in the city are controlled under Section 19.689 of the Chula Vista Municipal Code (Noise Control Ordinance). This ordinance contains noise performance standards for allowable noise generation from stationary sources of noise (i.e. noise sources other than transportation related) and are stated as the maximum permissible sound level that can be produced by a noise generator at a receiving property boundary (see Table 2). The Proposed Project includes residential, school, commercial, mixed use, and park uses. In general, increased commercial land increases the potential that noise producing uses will be developed. New commercial development in close proximity to residential uses could result in an increase in ambient noise levels. Compliance with the City's Noise Control Ordinance will ensure that future development occurring in conformance to the Proposed Project would not conflict with the policies in the General Plan.

9.0 References Cited

California Department of Transportation (Caltrans)

1983 California Vehicle Noise Emission Levels. Report No. FHWA/CA/TI-84/13. August.

2008 2007 Annual Average Daily Truck Traffic on the California State Highway System. Compiled by Traffic Data Branch Division of Traffic Operations. September.

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2005 Chula Vista General Plan Update.

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1979 Federal Highway Administration Noise Prediction Model. Report No. FHWA-RD-77-108, with California Vehicle Noise Emissions Levels. Washington, D.C.

Linscott, Law, & Greenspan (LLG) Engineers

2012 Draft Revised Traffic Impact Analysis for the Chula Vista General Plan & General Development Plan Amendment for Otay Land Company. LLG Ref. 3-09-1885. June 11.

San Diego County Airport Land Use Commission

2010 Brown Field Municipal Airport Land Use Compatibility Plan. January 25.

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ATTACHMENT 1
Noise Measurement Data

Meas	Site Location	Number	Date	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk
Measurement 1											
0		0	16Jun	10 12:03:00	59.5	44.2	61.9	57.1	39.9	79.1	0.0
0		0	16Jun	10 12:04:00	60.0	56.3	74.0	65.9	41.8	75.4	0.0
0		0	16Jun	10 12:05:00	60.0	49.9	67.7	60.8	41.5	69.1	0.0
0		0	16Jun	10 12:06:00	60.0	51.2	68.9	60.3	41.8	74.2	0.0
0		0	16Jun	10 12:07:00	60.0	51.6	69.4	65.8	42.1	86.4	103.7
0		0	16Jun	10 12:08:00	60.0	56.2	73.9	79.6	41.7	103.3	108.1
0		0	16Jun	10 12:09:00	60.0	43.6	61.4	56.8	40.5	72.6	0.0
0		0	16Jun	10 12:10:00	60.0	51.1	68.9	73.1	41.0	94.6	0.0
0		0	16Jun	10 12:11:00	60.0	44.8	62.6	51.6	40.3	65.9	0.0
0		0	16Jun	10 12:12:00	60.0	52.5	70.3	76.7	41.5	99.2	106.2
0		0	16Jun	10 12:13:00	60.0	47.4	65.1	58.9	41.5	74.7	103.7
0		0	16Jun	10 12:14:00	60.0	45.1	62.9	50.6	40.6	69.3	0.0
0		0	16Jun	10 12:15:00	60.0	48.7	66.5	56.0	41.5	70.1	0.0
0		0	16Jun	10 12:16:00	60.0	51.5	69.3	63.9	41.9	83.9	103.7
0		0	16Jun	10 12:17:00	60.0	54.1	71.9	65.9	43.3	78.2	0.0
0		0	16Jun	10 12:18:00	0.5	58.8	55.7	59.5	55.7	74.4	0.0
Measurement 2											
0		0	16Jun	10 12:28:00	59.7	62.4	80.2	74.1	45.7	84.9	0.0
0		0	16Jun	10 12:29:00	60.0	53.2	71.0	58.5	48.0	73.1	0.0
0		0	16Jun	10 12:30:00	60.0	58.6	76.4	71.0	45.4	82.6	0.0
0		0	16Jun	10 12:31:00	60.0	62.9	80.7	76.2	44.3	89.2	0.0
0		0	16Jun	10 12:32:00	60.0	58.1	75.9	71.2	47.4	82.0	0.0
0		0	16Jun	10 12:33:00	60.0	66.6	84.4	78.5	45.9	90.8	0.0
0		0	16Jun	10 12:34:00	60.0	68.2	86.0	79.6	49.1	92.0	103.7
0		0	16Jun	10 12:35:00	60.0	53.6	71.4	62.5	45.8	82.3	0.0
0		0	16Jun	10 12:36:00	60.0	64.1	81.9	73.7	45.5	89.2	0.0
0		0	16Jun	10 12:37:00	60.0	60.0	77.8	70.1	45.5	81.5	0.0
0		0	16Jun	10 12:38:00	60.0	63.5	81.2	76.1	47.5	97.5	0.0
0		0	16Jun	10 12:39:00	60.0	60.0	77.7	70.6	44.4	83.3	0.0
0		0	16Jun	10 12:40:00	60.0	67.0	84.7	77.7	50.2	94.8	0.0
0		0	16Jun	10 12:41:00	60.0	63.4	81.1	74.4	47.6	86.5	0.0
0		0	16Jun	10 12:42:00	60.0	63.8	81.6	76.5	44.2	88.2	0.0
0		0	16Jun	10 12:43:00	0.6	58.0	55.5	58.9	57.2	70.3	0.0
Measurement 4											
0		0	16Jun	10 13:26:00	59.6	54.7	72.5	71.5	44.0	89.1	0.0
0		0	16Jun	10 13:27:00	60.0	64.9	82.6	77.7	45.5	91.4	103.7
0		0	16Jun	10 13:28:00	60.0	52.2	69.9	59.9	44.3	72.5	0.0
0		0	16Jun	10 13:29:00	60.0	61.3	79.1	71.2	45.1	82.6	0.0
0		0	16Jun	10 13:30:00	60.0	61.3	79.1	73.4	45.2	84.9	0.0
0		0	16Jun	10 13:31:00	60.0	63.2	81.0	72.7	43.2	83.7	0.0
0		0	16Jun	10 13:32:00	60.0	60.8	78.5	72.0	43.5	83.2	0.0
0		0	16Jun	10 13:33:00	60.0	61.6	79.4	72.5	42.8	91.4	0.0
0		0	16Jun	10 13:34:00	60.0	63.8	81.5	73.0	44.5	86.7	0.0
0		0	16Jun	10 13:35:00	60.0	61.5	79.3	73.9	44.6	91.0	0.0
0		0	16Jun	10 13:36:00	60.0	58.5	76.3	69.4	44.4	81.9	0.0
0		0	16Jun	10 13:37:00	60.0	63.9	81.7	73.3	49.3	85.0	0.0
0		0	16Jun	10 13:38:00	60.0	63.8	81.6	75.4	51.0	90.6	0.0
0		0	16Jun	10 13:39:00	60.0	62.6	80.4	72.2	43.2	84.0	0.0
0		0	16Jun	10 13:40:00	60.0	55.2	73.0	68.9	42.8	81.2	0.0
0		0	16Jun	10 13:41:00	0.6	70.1	67.8	71.8	68.3	82.7	0.0
0		0	16Jun	10 13:59:59	0.7	67.4	65.8	68.8	63.7	79.9	0.0
0		0	16Jun	10 14:00:00	0.3	66.7	61.7	67.7	66.1	77.2	0.0
Measurement 5											
0		0	16Jun	10 14:00:01	58.7	67.5	85.2	81.8	44.8	95.1	0.0
0		0	16Jun	10 14:01:00	60.0	70.4	88.2	82.0	49.0	96.4	0.0
0		0	16Jun	10 14:02:00	60.0	63.5	81.3	81.5	47.0	93.9	0.0
0		0	16Jun	10 14:03:00	60.0	63.0	80.7	76.6	45.3	90.0	0.0
0		0	16Jun	10 14:04:00	60.0	61.0	78.8	77.8	45.3	90.8	0.0
0		0	16Jun	10 14:05:00	60.0	65.5	83.2	80.0	45.5	92.4	0.0
0		0	16Jun	10 14:06:00	60.0	68.3	86.1	83.8	47.0	95.3	0.0
0		0	16Jun	10 14:07:00	60.0	68.6	86.4	79.8	47.8	93.1	0.0
0		0	16Jun	10 14:08:00	60.0	63.9	81.6	83.7	46.0	97.3	103.7
0		0	16Jun	10 14:09:00	60.0	65.3	83.1	79.4	46.9	92.0	0.0
0		0	16Jun	10 14:10:00	60.0	63.3	81.1	78.1	45.7	90.9	0.0
0		0	16Jun	10 14:11:00	60.0	62.2	79.9	77.2	44.5	88.9	0.0
0		0	16Jun	10 14:12:00	60.0	63.1	80.9	76.4	48.5	88.3	0.0
0		0	16Jun	10 14:13:00	60.0	67.1	84.9	80.4	48.2	91.7	0.0
0		0	16Jun	10 14:14:00	60.0	63.7	81.5	76.0	45.8	89.4	0.0
0		0	16Jun	10 14:15:00	0.3	50.1	45.1	50.9	49.7	68.4	0.0
Measurement 6											
0		0	16Jun	10 14:37:00	59.2	69.4	87.1	80.8	54.8	95.4	0.0
0		0	16Jun	10 14:38:00	60.0	71.2	89.0	81.3	56.9	96.9	0.0
0		0	16Jun	10 14:39:00	60.0	73.9	91.6	87.5	54.3	98.7	106.2
0		0	16Jun	10 14:40:00	60.0	67.6	85.4	80.5	49.8	95.5	0.0
0		0	16Jun	10 14:41:00	60.0	75.9	93.7	88.3	55.4	99.5	103.7

0	0	16Jun 10 14:42:00	60.0	78.3	96.0	88.5	54.9	101.5	109.7
0	0	16Jun 10 14:43:00	60.0	72.3	90.1	82.2	50.7	97.7	103.7
0	0	16Jun 10 14:44:00	60.0	71.2	89.0	82.8	51.3	96.2	0.0
0	0	16Jun 10 14:45:00	60.0	75.5	93.3	86.8	53.8	101.1	106.2
0	0	16Jun 10 14:46:00	60.0	75.8	93.5	89.2	49.8	100.2	109.7
0	0	16Jun 10 14:47:00	60.0	74.8	92.6	83.2	56.0	101.2	103.7
0	0	16Jun 10 14:48:00	60.0	75.4	93.2	87.9	52.6	104.3	106.2
0	0	16Jun 10 14:49:00	60.0	71.4	89.2	83.8	52.9	94.6	0.0
0	0	16Jun 10 14:50:00	60.0	68.2	86.0	82.8	51.0	95.2	0.0
0	0	16Jun 10 14:51:00	60.0	75.4	93.2	85.5	59.0	99.3	106.2
0	0	16Jun 10 14:52:00	0.8	79.2	77.9	80.0	78.1	93.5	0.0
Measurement 7									
0	0	16Jun 10 15:00:00	59.5	77.9	95.6	88.9	56.0	101.5	106.2
0	0	16Jun 10 15:01:00	60.0	73.8	91.6	87.7	57.8	98.9	106.2
0	0	16Jun 10 15:02:00	60.0	73.0	90.8	83.4	54.9	95.2	0.0
0	0	16Jun 10 15:03:00	60.0	71.8	89.6	83.0	49.8	94.7	0.0
0	0	16Jun 10 15:04:00	60.0	70.3	88.0	84.6	48.0	96.2	103.7
0	0	16Jun 10 15:05:00	60.0	75.1	92.8	87.6	53.7	100.0	103.7
0	0	16Jun 10 15:06:00	60.0	74.7	92.5	83.6	55.0	95.7	103.7
0	0	16Jun 10 15:07:00	60.0	70.2	88.0	80.9	53.1	92.7	0.0
0	0	16Jun 10 15:08:00	60.0	73.5	91.2	83.8	54.2	94.8	0.0
0	0	16Jun 10 15:09:00	60.0	73.7	91.5	82.3	58.5	93.3	0.0
0	0	16Jun 10 15:10:00	60.0	73.7	91.5	84.6	53.4	97.6	0.0
0	0	16Jun 10 15:11:00	60.0	74.1	91.8	85.2	54.5	97.0	103.7
0	0	16Jun 10 15:12:00	60.0	71.9	89.7	83.7	49.6	104.6	108.1
0	0	16Jun 10 15:13:00	60.0	73.2	90.9	86.0	50.5	98.3	103.7
0	0	16Jun 10 15:14:00	60.0	73.5	91.3	85.5	51.1	96.5	103.7
0	0	16Jun 10 15:15:00	0.5	61.4	58.4	62.6	60.6	73.0	0.0


```

0      0      16Jun 10 15:11:10 66.6 71.0 73.6
0      0      16Jun 10 15:11:15 79.0 85.2 86.0
0      0      16Jun 10 15:11:20 73.6 79.2 80.6
0      0      16Jun 10 15:11:25 62.6 72.0 69.6
0      0      16Jun 10 15:11:30 64.3 69.1 71.3
0      0      16Jun 10 15:11:35 64.6 67.2 71.5
0      0      16Jun 10 15:11:40 68.4 74.0 75.4
0      0      16Jun 10 15:11:45 78.1 84.1 85.1
0      0      16Jun 10 15:11:50 71.9 83.0 78.9
0      0      16Jun 10 15:11:55 74.9 80.2 81.9
0      0      16Jun 10 15:12:00 75.8 83.7 82.8
0      0      16Jun 10 15:12:05 68.6 70.5 75.6
0      0      16Jun 10 15:12:10 73.4 79.6 80.4
0      0      16Jun 10 15:12:15 59.8 64.9 66.8
0      0      16Jun 10 15:12:20 76.6 80.9 83.6
0      0      16Jun 10 15:12:25 75.8 79.0 82.7
0      0      16Jun 10 15:12:30 67.3 72.1 74.3
0      0      16Jun 10 15:12:35 72.9 79.4 79.9
0      0      16Jun 10 15:12:40 54.4 56.8 61.4
0      0      16Jun 10 15:12:45 51.8 53.1 58.8
0      0      16Jun 10 15:12:50 51.9 53.9 58.9
0      0      16Jun 10 15:12:55 62.8 69.2 69.8
0      0      16Jun 10 15:13:00 65.7 70.4 72.7
0      0      16Jun 10 15:13:05 58.7 64.0 65.7
0      0      16Jun 10 15:13:10 76.5 82.6 83.5
0      0      16Jun 10 15:13:15 78.3 85.1 85.3
0      0      16Jun 10 15:13:20 71.9 76.6 78.9
0      0      16Jun 10 15:13:25 74.2 80.9 81.2
0      0      16Jun 10 15:13:30 54.0 54.7 61.0
0      0      16Jun 10 15:13:35 54.7 56.6 61.7
0      0      16Jun 10 15:13:40 59.0 65.1 66.0
0      0      16Jun 10 15:13:45 79.3 86.0 86.3
0      0      16Jun 10 15:13:50 56.3 62.7 63.3
0      0      16Jun 10 15:13:55 54.4 59.6 61.4
0      0      16Jun 10 15:14:00 69.2 72.4 76.2
0      0      16Jun 10 15:14:05 65.6 69.0 72.6
0      0      16Jun 10 15:14:10 66.1 69.1 73.1
0      0      16Jun 10 15:14:15 68.6 70.9 75.6
0      0      16Jun 10 15:14:20 69.1 72.7 76.1
0      0      16Jun 10 15:14:25 78.2 83.7 85.2
0      0      16Jun 10 15:14:30 76.8 82.1 83.8
0      0      16Jun 10 15:14:35 70.7 78.7 77.6
0      0      16Jun 10 15:14:40 78.1 85.4 85.1
0      0      16Jun 10 15:14:45 76.5 85.5 83.5
0      0      16Jun 10 15:14:50 53.0 55.0 60.0
0      0      16Jun 10 15:14:55 64.3 68.9 71.2
C:\NOISE\LARDAV\SLMUTIL\16JUN_11.bin Time History Data
Sample Period (sec): 5.000

```

Site Location	Meas Number	Date	Time	Level	Lmax	SEL
0		16Jun 10	15:15:00	60.6	60.6	67.6
Stop	Key					

C:\NOISE\LARDAV\SLMUTIL\21JUN_14.bin Interval Data

Meas	Site Location	Number	Date	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk
Measurement 3											
0		0	21Jun 10	15:10:05	54.3	51.0	68.3	59.1	45.7	78.3	0.0
0		0	21Jun 10	15:11:00	60.0	52.9	70.7	63.9	49.0	91.8	0.0
0		0	21Jun 10	15:12:00	60.0	50.3	68.1	54.2	47.8	76.0	0.0
0		0	21Jun 10	15:13:00	60.0	51.2	69.0	70.9	47.4	96.9	0.0
0		0	21Jun 10	15:14:00	60.0	50.6	68.3	54.9	48.2	74.1	0.0
0		0	21Jun 10	15:15:00	60.0	52.5	70.3	57.7	48.2	82.7	0.0
0		0	21Jun 10	15:16:00	60.0	49.3	67.1	53.2	46.2	67.2	0.0
0		0	21Jun 10	15:17:00	60.0	49.6	67.3	55.8	46.0	75.1	0.0
0		0	21Jun 10	15:18:00	60.0	50.3	68.1	54.0	47.0	67.0	0.0
0		0	21Jun 10	15:19:00	60.0	50.1	67.9	54.0	46.9	67.1	0.0
0		0	21Jun 10	15:20:00	60.0	51.2	69.0	64.1	47.7	90.0	0.0
0		0	21Jun 10	15:21:00	60.0	49.8	67.6	56.5	47.3	75.2	0.0
0		0	21Jun 10	15:22:00	60.0	51.1	68.9	63.1	47.0	86.5	0.0
0		0	21Jun 10	15:23:00	60.0	55.9	73.6	67.1	47.7	79.5	0.0
0		0	21Jun 10	15:24:00	60.0	55.6	73.3	66.4	46.3	76.3	0.0
0		0	21Jun 10	15:25:00	6.4	48.6	56.7	51.7	46.6	66.9	0.0

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