SUBCHAPTER 2.5

NOISE

2.5 Noise

The 1981 and 1983 EIRs identified noise impacts to residential uses as significant, but mitigable. These EIRs concluded that planned residential uses would be significantly impacted by noise generated by I-15 and SR-76/Pala Road. Mitigation measures included constructing sound walls and/or incorporating noise attenuation measures into residences. In addition to traffic noise impacts, the 1983 EIR identified noise impacts related to heating, ventilation, and air conditioning (HVAC) equipment associated with industrial uses as significant but mitigable. Mitigation for HVAC equipment focused on building enclosures or sound barriers to attenuate noise.

Since the two previous EIRs were certified, the traffic on I-15 and SR-76/Pala Road has increased. As a result, the noise contours predicted in the earlier EIRs are no longer valid. In addition, major roadways within the Project site area may carry sufficient traffic to warrant noise attenuation to protect adjacent residential areas. Thus, new noise analysis is required to accurately evaluate the anticipated traffic noise levels and identify appropriate noise attenuation measures. Technical review of commercial and industrial mechanical equipment sources also receives additional scrutiny since the prior documents were completed over 25 years ago.

This subchapter of the EIR summarizes the Campus Park West Acoustical Site Assessment Report (HELIX 2013d), which is contained in Appendix F. The reader is referred to text below for new and/or revised evaluation of all issues related to noise for the Project.

2.5.1 Existing Conditions

2.5.1.1 *Noise Descriptors*

Noise has been simply defined as "unwanted sound." Sound becomes "unwanted" when it interferes with normal activities, when it causes actual physical harm, or has adverse effects on health.

Sound-level values discussed in this subchapter are expressed in terms of decibels (dB). Sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA), which are adjusted to approximate the hearing sensitivity of humans. Time-averaged noise levels are referred to as "equivalent sound level" (L_{EQ}), which represents the average sound level over a given sample period. Unless a different time period is specified, L_{EQ} refers to a period of one hour.

The Community Noise Equivalent Level (CNEL) is the average of the intensity of a sound, with corrections made for time of day, and then averaged over 24 hours. The corrections are additions made to actual sound levels to account for increased human sensitivity to sound during the evening and night hours, when there is a decrease in the overall amount and loudness of noise generated, as compared to daytime hours. During these hours, sounds seem louder, and are weighted accordingly. The time of day corrections require the addition of 5 dB to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and the addition of 10 dB to sound levels at night from 10:00 p.m. to 7:00 a.m.

2.5.1.2 *Existing Noise Sources*

The primary noise source in the vicinity of the Project site is automobile and truck traffic on I-15 and SR-76. The roads are adjacent to the Project site's western and southern property lines, respectively. Other existing noise sources include traffic on local roadways (i.e., Pankey Road, unnamed dirt roads), intermittent agricultural noise associated with orchards, and recreational model plane noise. The agricultural and on-site recreational noise sources are, however, considered negligible due to distance and infrequency of use.

The level of traffic noise depends on the traffic volume and speed, as well as the mix of cars and trucks in traffic flow, because the noise generated is a combination of sounds produced by engines, exhaust, and tires. Generally, heavier traffic volumes, higher speeds, and greater numbers of trucks increase the loudness of traffic noise. A noise level increase of three dBA would result from the doubling of full-speed traffic on a roadway.

2.5.1.3 *Existing Ambient Noise Levels*

To determine the existing noise environment, noise measurements were conducted at the Project site during the day on Wednesday, June 13, 2008 adjacent to I-15 and on Monday, October 1, 2012 adjacent to SR-76. The measurement near the edge of I-15 was made approximately 170 feet south of the centerline of Pala Mesa Drive (currently unused overpass). The measured noise level was 76.8 dBA L_{EQ} (averaged over a one-hour time period). The measurement near SR-76 was taken in open space east of Pankey Road. The measured noise level at that location was 63.9 dBA L_{EQ} (averaged over a one-hour time period). See Table 1-3 in the Project Acoustical Site Assessment Report in Appendix F for a summary of on-site ambient measurements.

The I-15 monitoring location was modeled to compare actual readings with predicted readings, in order to calibrate the noise model. The reader is referred to Appendix F for specifics on the calibration. The modeled existing ambient noise level at the measurement location was less than one dB greater than the measured noise level. This generally confirms the assumptions used in the noise model.

Supplemental 15-minute off-site ambient noise measurements were made at five locations (OS-1 through OS-5) near residences along Dulin Road/Pala Mesa Drive on June 28, 2010 between 11:00 a.m. and 3:00 p.m. These measurements, traffic counts for the time period, and site conditions are summarized in Tables 1-6 and 1-7 in the Project Acoustical Site Assessment Report in Appendix F. As shown in Table 1-7 in Appendix F, off-site noise levels range from 51.2 to 64.0 dB L_{EQ}. The off-site measurement locations are shown on Figure 1-5 of that appendix. These measurements were used to compute and approximate CNEL levels for the measurement locations based on normal 24-hour traffic distribution.

2.5.1.4 *Existing Noise-sensitive Land Uses*

Noise-sensitive land uses (NSLUs) include uses associated with indoor and/or outdoor activities that may be subject to stress and/or substantial interference from noise. NSLUs include any

residence, hospital, school, hotel, resort, library, or other facilities where lower noise levels are an important attribute of the environment.

The majority of the area adjacent to the Project is undeveloped open space or former grazing/agricultural land, with the exception of I-15 to the west and SR-76, which bisects the Project site. South of SR-76 and further to the east, there are orchards, single-family residences, and additional open space areas. The area west of I-15 includes single-family residences, a golf course, a fire station, agriculture, and open space uses. Numerous single-family homes and some nursery facilities are located among the hills north of the Project site.

There are several residences to the east of the site, only one of which is planned to remain; the other residences have been or will be removed by other projects. The residence to remain is located approximately 1,000 feet east of the planned alignment of Horse Ranch Creek Road, well beyond the potential noise impact distance from the road or the Project. Therefore, it is not further considered in this report.

Future multi-family residential units within PAs 2 and 3 of the Proposed Project also would be considered NSLUs.

2.5.1.5 *Regulatory Framework*

The County addresses two separate types of noise sources, mobile and stationary. In the context of the noise analysis, transportation (mobile) noise levels associated with the Proposed Project are regulated by goals and policies in the Noise Element in the County General Plan (outlined below). County Noise Ordinance Sections 36.404 and 36.409 govern operational (stationary) and construction noise levels, respectively.

"Off-site" impacts generally focus on transportation-related noise associated with increases in Project-related vehicular activity. Noise level increases and impacts attributable to development of a project are estimated by comparing the "with project" ADT to the "without project" ADT (refer to Subchapter 2.3, Transportation/Traffic, of this EIR).

County of San Diego Noise Element

The County has adopted interior and exterior noise standards as part of the Noise Element in the General Plan for assessing the compatibility of land uses with transportation-related noise impacts. For assessing noise impacts to sensitive residential land uses, the County standard is an exterior noise level (for usable outdoor space) of 60 dBA CNEL or less for single-family homes, 65 dBA CNEL or less for multi-family residential uses, and an interior noise standard of 45 dBA CNEL for both housing types. Applicable goals from the Noise Element are as follows and analysis of Project consistency with these policies is provided in Section 3.1.5, Land Use and Planning, of this EIR:

- Goal N-1: Land Use Compatibility, Policies N-1.1 through N-1.3
- Goal N-2: Protection of Noise-sensitive Uses, Policies N-2.1 and N-2.2
- Goal N-4: Transportation-related Noise Generators, Policies N-4.1, 4.2, 4.5 and 4.6

- Goal N-5: Non-transportation-related Noise Sources, Policy N-5.1
- Goal N-6: Temporary and/or Nuisance Noise, Policies N-6.2 through N-6.4

County of San Diego Noise Ordinance

Section 36.404 of the County Noise Ordinance provides performance standards and noise control guidelines for determining and mitigating non-transportation (stationary) noise source impacts to residential properties. The purpose of the Noise Ordinance is to protect, create, and maintain an environment free from noise and vibration that may jeopardize the health or welfare, or degrade the quality of life.

According to County stationary source exterior noise standards, no person shall operate any source of sound at any location within the County or allow the creation of any noise on a property that causes the noise levels to exceed the exterior noise standards at the property boundary. The Noise Ordinance sets an exterior noise limit for residential land uses adjacent to the property of 50 dBA L_{EQ} for daytime hours of 7:00 a.m. to 10:00 p.m. and 45 dBA L_{EQ} during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m.

Section 36.409 of the Noise Ordinance controls construction equipment noise and establishes a 75 dBA L_{EQ} standard between 7:00 a.m. and 7:00 p.m. Monday through Saturday at the boundary line of the property where the noise source is being generated or any occupied property where noise is received during construction. Excluding emergency work, the County sets a threshold for construction equipment of 75 dBA averaged over a period of eight hours from 7:00 a.m. to 7:00 p.m.

Section 36.410 of the County Noise Ordinance sets sound level limitations on "impulsive" or "single event" noise of 85 dBA L_{max} at residential uses. In addition to the general limitations on sound levels in Section 36.404, and excluding emergency work, work on a public road project shall not result in an impulsive noise that exceeds 82 dBA at property boundaries.

County of San Diego Standards for Sensitive Birds

In 1991, the USFWS recommended that noise levels not exceed 60 dBA or ambient conditions (whichever is greater) to protect the coastal California gnatcatcher and other sensitive bird species during their breeding seasons. Subchapter 2.6, Biological Resources, addresses potential noise impacts to sensitive birds.

2.5.2 Analysis of Project Effects and Determination as to Significance

The noise analysis presented herein evaluates Project effects to on-site and off-site NSLUs associated with both on- and off-site improvements and traffic. Because the traffic conditions for **Scenarios 1** and **2** are similar, the potential impacts associated with regard to traffic noise and are, therefore, not separately discussed. An explanation of this rationale is provided in Appendix F.

2.5.2.1 *Transportation Noise Levels*

Guidelines for Determining Significance

A significant direct noise impact would occur if Project implementation would:

1. Expose exterior on- or off-site, existing or reasonably foreseeable future, NSLUs to noise (including road noise) in excess of 60 dBA CNEL for single-family residential uses, 65 dBA CNEL for multi-family residential uses, or an increase of 10 dBA CNEL or more over existing noise levels (if that noise level is less than 50 CNEL).

2. Expose interior on- or off-site, existing or reasonably foreseeable future, NSLUs to noise in excess of 45 dBA CNEL.

Guideline Source

The above guidelines are based on the County's Guidelines for Determining Significance – Noise (January 27, 2009), as amended by the 2011 General Plan with regard to exterior standards for multi-family residential uses.

Analysis

The Traffic Noise Model (TNM) software was used to project the expected roadway noise impacts. TNM calculates the daytime average Hourly Noise Level (HNL) from traffic data; including road alignment, elevation, lane configuration, projected traffic volumes, estimated truck composition percentages, and vehicle speeds. Because much of the Project area would be paved, hard surface noise attenuation is assumed in the analysis for buildout effects. This results in a conservative (worst-case) assessment, as noise attenuation provided by vegetation or soil under soft surface assumptions was not incorporated into the model. The model calculated noise output represents the one-hour L_{EQ}, and is the equivalent CNEL with the use of 8 to 10 percent of the average daily traffic (considered to represent peak hour traffic; Caltrans Technical Noise Supplement, November 2009).

Exterior Traffic Noise Impact

Exterior on-site noise levels were analyzed using the Year 2030 (with and without Project) traffic volume forecasts from the Traffic Impact Analysis; exterior off-site noise levels were analyzed based on Existing, Existing Plus Project, Existing Plus Cumulative, and Existing Plus Cumulative Plus Project conditions (Appendix D). The change in traffic roadway noise at any location is directly proportional to the change in traffic volume if the roadway alignments are unchanged and traffic speeds are constant. This allows a determination of the change in noise associated with the Project at any area from the Project traffic information.

On-site Receptors

Project modeling was conducted under assumptions reflecting the likely build out scenario described in Section 1.2.2.6 of this EIR, with initial development occurring south of SR-76, followed in turn by general commercial and mixed-use core uses in PA 2, multi-family residential uses in PA 3, and limited impact industrial uses in PA 1.

The calculated noise levels under Year 2030 Plus Project traffic conditions (including on-site traffic) at the proposed on-site residential uses within PAs 2 and 3 are presented in Table 2.5-1, Year 2030 Plus Project Traffic Noise Levels at Future Residential Receivers. A six-foot high fire control wall is included in the Project design along the southwestern to southeastern outer edge of area PA 2 under **Scenarios 1** and **2** and the northern edge of PA 5 under **Scenario 1**. Modeling was initially performed both with and without the firewall with minimal change noted, so modeling results presented in Table 2.5-1 are based on the worst-case condition without these firewalls.

The ultimate configuration of general commercial structures in PA 2 is unknown at this time. As a result, assumptions regarding potential for noise shielding by structures within the PA 2 mixed-use core and PA 3 multi-family area is speculative at this time. Thus, modeling of the mixed-use core west of Pankey Road assuming unobstructed sound patterns shows all analyzed residential receivers (R12 through R19) in PAs 2 and 3 would be exposed to noise levels in excess of 65 CNEL (65.9 to 67.9 CNEL). These impacts to elevated exterior use areas on balconies are considered **significant**. (**Impact N-1)**

Modeling was completed to determine if barriers would lower exterior noise levels to meet the threshold. It was determined that a 5.5-foot high balcony barrier would provide adequate noise attenuation for the upper story residents of PAs 2 and 3 (no residential uses would be allowed on the ground floor of PA 2 mixed core uses as part of Project design).

Similarly, unobstructed modeling shows that analyzed ground-level receiver locations (R01 through R11) to the immediate east of Pankey Road along the perimeter of PA 3 and Pankey Road would have noise impacts in excess of the County's exterior transportation noise impact level of 65 CNEL for multi-family uses. Traffic-related noise modeling projects noise levels at 66.6 to 68.8 CNEL (Table 2.5-1). Impacts to exterior use areas at ground level in PA 3 are considered **significant**. (**Impact N-2)**

Modeling was completed assuming a six-foot barrier on Pankey Road west of PA 3. All structures were shown as attenuated, with additional shielding provided beyond that required. A lower (5.5-foot high) wall was then modeled to determine its effectiveness at attenuating noise. Table 2.5-1 shows the results of this modeling as compared to the unattenuated noise at receivers within the Proposed Project site. With this sound barrier in place, all ground level receivers east of Pankey Road would have less than significant impacts with regards to noise. The modeled noise wall locations are shown on Figure 2.5-1, Required On-site Noise Wall Along Pankey Road.

Off-site Receptors

Off-site transportation-related noise would be associated with the operations and buildout of the Project. Existing measured and calculated noise levels are presented on Table 1-7 in the Project Acoustical Site Assessment Report in Appendix F. Traffic data for the Existing, Existing Plus Project, Existing Plus Cumulative, and Existing Plus Cumulative Plus Project conditions are based on the Project Traffic Study contained in Appendix D. Potential traffic volume changes due to the Project are highlighted on Table 2-1 in the Project Acoustical Site Assessment Report in Appendix F. Similar to on-site conditions, additional traffic on area roadways would have the potential to affect off-site residences. As noted above, existing noise levels along Dulin Road (at one location close to I-15) are already elevated, ranging from 55.6 to 64.4 dBA CNEL at the measured locations. Along Pala Mesa Drive west of I-15, conditions are somewhat quieter, with measured locations ranging from 51.9 to 60.1 dBA CNEL (with the louder locations closer to I-15). With Project development, noise levels would be expected to rise in these areas as discussed below.

Both Pala Mesa Drive and Dulin Road (future Pankey Road) were modeled for worst-case conditions without consideration of topographic, vegetative, or structural shielding along the roadways. As shown on Figure 2.5-2, Traffic Noise Contours, as well as Table 2.5-2, Near Term Conditions: Distance to Noise Contour Lines from the Centerlines of Roadways, noise levels 100 feet from the roadway centerline are projected to be 62.0 to 65.0 dBA CNEL along Pala Mesa Drive/Dulin Road. Unattenuated, the future noise levels along this roadway could exceed the 60-dBA CNEL threshold for exterior use areas for single-family residential uses.

Field reviews of the existing Pala Mesa Drive and Dulin Road residences, however, show that homes are oriented with either the front of the house (with driveways and garages) fronting the roads, or they have fencing between the roads and the exterior use areas. Specifics are provided below.

All of the residences on the northwest side of Dulin Road face the roadway. The 60-dBA CNEL contour passes in front of or through the front section of the houses and does not include associated outdoor use areas. The residences on the southeastern side of the road, from south of Shearer Crossing to near the eastern arm of Lake Circle Drive, have the backs of the homes shielded by noise control fences. The reader is referred to Figure 2.5-3, Dulin Road Residences with Exterior Noise Control, for photographs of the noise control fences in this area.

Residences along Pala Mesa Drive also principally face the roadway, with the outdoor use areas either fully or nearly beyond the 60-dBA CNEL contour (in either Existing or Existing Plus Project conditions) and shielded by the residence. There are a few exceptions on the southern side of the road adjacent to and facing Old Highway 395 and very close to I-15 (e.g., APN 125-050-6300). Noise from I-15 in this area is so substantial that noise from vehicles on Pala Mesa Drive presents a negligible contribution to conditions at this location and it is not further discussed in this chapter. Further to the west are APNs 108-433-3400 and 108-433-0100. The outdoor use areas of these parcels would have clear views of Pala Mesa Drive, but both have solid noise control walls surrounding the areas. The reader is referred to Figure 2.5-4, Pala Mesa Drive Residences with Exterior Noise Control. In this photograph, one of the residences is

obscured by trees but the fence can be seen in gaps between branches. Noise impact modeling was completed for residences with outdoor use areas shielded by existing fences or walls to evaluate the effectiveness of these structures at attenuating future noise level increases along local roads affected by the Proposed Project.

As shown on Table 2.5-3, Future Noise Levels at Off-site Noise Sensitive Land Uses, these homes are all expected to be subject to less than 60 dBA CNEL under each of the future modeled conditions. As shown in Table 2.5-4, Direct Project Noise Impacts, traffic would not increase noise to greater than 60 CNEL at a distance of 100 feet from any modeled roadway, where it does not currently exceed that threshold. For those roadways where traffic noise already exceeds 60 CNEL, Project-related traffic would double the existing sound (increase of three dBA) at one location—along SR 76 between the I-15 Northbound Ramps and Pankey Road. There are no NSLUs in this area. Direct impacts would, therefore, be **less than significant**.

Interior Traffic Noise Impact

The interior noise level is the difference between the predicted exterior noise level at the building façade and the noise reduction of the structure. The County requires that interior noise levels not exceed 45 dB CNEL. Typically, with the windows closed, building shells provide approximately 15 dB CNEL of noise reduction. Rooms exposed to an exterior CNEL greater than 60 dB could, therefore, result in an interior noise level greater than 45 dB CNEL. Reductions of 30 dB CNEL or greater from the exterior to the interior are normally feasible with enhanced building elements including thicker dual-paned windows with spacing of a ½-inch or greater.

On-site Receptors

As discussed above, multi-family residences in PA 2 and the western portion of PA 3 may be subject to an exterior noise impact greater than 65 dB CNEL, which based on a 15 CNEL exterior to interior reduction may have interior levels greater than 50 CNEL. Assuming typical construction shell reductions, exterior noise exposure would have the potential to result in an interior noise level greater than 45 dBA CNEL. Thus, the potential for an interior noise impact is considered **significant**. **(Impact N-3)**

Off-site Receptors

As noted above, off-site uses potentially affected by Project-related traffic noise would experience exterior noise of less than 60 dBA CNEL with existing barriers in place. As a result, the routine attenuation resulting from structural shielding would be expected to lower interior noise levels to 45 dBA CNEL or less. Therefore, interior traffic noise impacts to off-site residences are expected to be **less than significant**.

2.5.2.2 *Operational Noise Levels*

Guideline for Determining Significance

A significant direct noise impact would occur if Project implementation would:

3. Generate non-construction noise that exceeds the standards listed in the San Diego County Code, Section 36.404, Sound Level Limits, at all property lines.

Guideline Source

The above guideline is based on the County's Guidelines for Determining Significance – Noise (January 27, 2009).

Analysis

On-site Property Lines

Commercial Use Noise. The Project proposes mixed-use core, general commercial, limited impact industrial, and multi-family residential uses all in proximity to one another. Potential commercial uses in the mixed-use core area might feature noise sources that would impact the other mixed-use residential uses. Those commercial noise sources could include (but are not limited to) parking lots, rooftop mechanical equipment, automotive shops (with compressors, impact wrenches, and dynamometer), restaurants/nightclubs (with patron and music noise), and grocery stores (with refrigeration and freezer compressors). Impacts also could result from other adjacent residential HVAC units. If nighttime entertainment at cafés or other uses in PA 2 allow outdoor amplified music, property line noise impacts may exceed allowable limits. Even indoor nighttime entertainment venues can result in impacts if doors are open while music is played inside. Information regarding particular businesses and their specific building requirements (e.g., roof-top refrigeration, compressors, etc.) sufficient to quantify anticipated impacts are not currently available. Pending identification of specific commercial lessors and potential sound generation/development structure planning, impacts to the Project-related property lines, including abutting property lines adjacent to residential receptors in PAs 2 and 3, are conservatively assessed as **potentially significant. (Impact N-4)**

Sheriff's Station Noise. An additional on-site use that may involve a potential noise source is the Sheriff's station. A lot for purchase has been identified in the limited impact industrial area of the Campus Park West Project. Siren noise from emergency vehicles leaving the Sheriff's station would be exempted from County thresholds according to the Sections 36.402 and 36.417 of the County Noise Ordinance. Additionally, any noise related to potential helicopter activity during emergency response is also exempted. Sirens of vehicles to be used during specified shifts must be tested at the start of every shift, however, and this would be considered part of normal business operations. As such, it would be subject to County noise thresholds.

The Department of Justice Law Enforcement and Testing Standards note that the loudest siren should be 120 dBA at three meters (approximately 10 feet) from the front of the siren. It further

notes that sirens are highly directional and are normally mounted in the front facing grill area of the vehicle. Four-second tests were assumed for 37 siren tests in one hour. This equates to 109.3 dBA L_{EQ} at 10 feet from the test location. Since one shift would start at 6:00 a.m., it is assumed that siren testing would occur between 5:00 a.m. and 7:00 a.m. (being completed as officers either come off-duty, or as others prepare to leave on-duty). Depending on the location of the station, the size and orientation of the parking lot, and the presence of intervening buildings or barriers, the siren testing may exceed the nighttime hourly allowable level at the nearby on-site residences in PAs 2 or 3. Potential noise impacts from siren testing would therefore be **potentially significant**. **(Impact N-5)**

Fast Food/Gas Station Noise. **Scenario 2** of the Proposed Project also involves one new potential noise source with possible effects on nearby residences. The additional southern parcel along SR-76 may be developed with a roadside service use; options for the service are either a fast food restaurant or a gas station which may include a convenience store and carwash. Although a fast food development may not have noise impacts, the typical loudest carwash potentially associated with a gas station is characterized by an air blast dryer that creates a worst case noise of 75 dBA at 25 feet, which attenuates to less than 60 dBA at 85 feet. Due to the distance to future residences, potential car wash noise impacts within the additional southern parcel would therefore be **less than significant**.

Pump Station Noise. A pump station would be needed at the northerly extent of Campus Park West (refer to Figure 1-22). Three alternative locations for this northerly station are evaluated in this EIR, but only one would be required. One of these locations would be sited on site in the limited impact industrial area (PA 1) north of Pala Mesa Drive. (The other two alternative off-site locations are discussed below under Off-site Property Lines.) Regardless of its location, the RMWD pump station would be a submersible (mounted below-grade) sewer with an above-grade motor control center and electrical panel, which would be shielded by an enclosure. The only portion of the pump station that would produce potentially audible noise is the piping for the pump which would be constructed above ground, but located below grade in a covered pit. The noise associated with the piping would be inaudible from a distance greater than 10 feet away, and the nearest NSLU is a residence located more than 50 feet away from the closest proposed pump location. As detailed in the Project Acoustical Site Assessment Report, noise impacts from the proposed pump station design would be **less than significant**.

Off-site Property Lines

Sheriff's Station Noise. The sheriff's station siren testing discussed above under On-site Property Lines requires proximity for impacts to occur. At its closest potential location to NSLUs, the Sheriff station could be anywhere from 650 to 1,850 feet from off-site residences. At those distances, siren testing noise would not be above ambient noise levels (i.e., less than 50 dBA L_{EQ}). Therefore, although anticipated to be periodically audible, impacts to off-site residential uses west of I-15 or further away would not exceed the thresholds and would be **less than significant**.

Off-site Sewer Lift Station Noise. The Proposed Project would utilize an off-site lift station for the sewer needs of the development. This pump station (to be constructed by approved Campus

Park) would be sited on Campus Park property in the northeast quadrant of the Pankey Road/SR-76 intersection. The sewer lift station would pump all wastewater generated by the Project to an existing 12-inch force main in SR-76. Based on an evaluation of the design, the noise associated with the Campus Park sewer lift station would be inaudible from a distance greater than 10 feet away. There are no residences or NSLUs located in close proximity to the proposed pump location (including PA 3); therefore, potential noise impacts would be **less than significant**.

Off-site Pump Station Noise. As noted above, RMWD has requested that the Project environmentally clear some actions proposed for their overall system. Two additional alternative locations for the pump station are proposed off site north of Pala Mesa Road, and would be located west of I-15 (refer to Figure 1-22). The southernmost alternative site is located between Old Highway 395 and I-15 and the northernmost site is located west of Old Highway 395. For the reasons described above, these two alternative pump station locations would not produce noise in excess of thresholds. Similar to the on-site location, the only portion of the pump station that would produce potentially audible noise is the piping for the pump, which would be in a covered sump, would be inaudible from a distance greater than 10 feet away. As the nearest NSLU is a residence located more than 50 feet away from the closest proposed pump location, west of Old Highway 395, potential noise impacts would be **less than significant**.

2.5.2.3 *Construction Noise Levels*

Guideline for Determining Significance

A significant direct noise impact would occur if Project implementation would:

4. Generate construction noise that exceeds the standards listed in the San Diego County Code, Section 36.409, Sound Level Limitations on Construction Equipment.

Guideline Source

The above guideline is based on the County's Guidelines for Determining Significance – Noise (January 27, 2009).

Analysis

Construction noise represents a short-term impact on the ambient noise levels. All Project construction activities would occur during the County's allowable hours of operation. The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the location in which operation occurs, and the condition of the equipment. The average sound level of the construction activity also depends upon the amount of time that the equipment operates and the intensity of the construction during the time period.

On-site Effects

Construction noise modeling followed the construction stages outlined in Section 1.2.2.6 of this EIR. In general, Project construction would involve site preparation activities (e.g., clearing, grubbing, and grading), utilities installation, foundation construction, and finish construction. Project grading is designed to be balanced, with no import or export of dirt by heavy trucks for construction on the valley floor. Due to the rippable nature of the alluvial deposits over much of the site, no blasting is anticipated (Leighton and Associates, Incorporated 2012). Typically, the greatest one-hour noise level occurs during clearing, grubbing, and grading activities. Construction equipment used during this construction phase typically would include scrapers, dozers, compactors, and water trucks (see anticipated equipment in Chapter 1.0 of this EIR).

As part of a conservative analysis, it is assumed that the mixed use residential would be completed prior to the Phase 2 grading, and that the residential uses east of Pankey Road could be completed and occupied prior to the final grading of the light industrial area north of Pala Mesa Drive.

The closest distance between the multi-family area east of Pankey Road and the mixed use development in the Phase 1 area is approximately 160 feet; this is the same distance from the light industrial area to the multi-family residential area east of Pankey Road. The loudest equipment operations for mass grading occur when a scraper is loading, with loading operations often utilizing tandem units to completely fill the pan of each scraper. The Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) lists a scraper as creating a noise level of 83.6 dBA at a distance of 50 feet. This equates to a 79.6 dBA L_{EQ} impact (82.6 dBA L_{EQ} for two units) at a 40 percent operational time. At a distance of 160 feet, this impact would be reduced by attenuation to 69.5 dBA L_{EQ} for a single unit, or 72.5 dBA L_{EQ} for a tandem unit. In this worst case scenario, if the units were to continuously work for eight hours, it would result in a noise level of 72.5 dBA L_{EQ} (8-hour) at the closest residential area. Accordingly, because this is below the related Noise Ordinance standard of 75 dBA L_{EQ}, associated impacts would be **less than significant**.

During vertical construction, the loudest portion of the construction operations typically would be the foundation excavation and concrete pour. The loudest piece of equipment, an excavator used in foundation trenching, would have little potential of creating noise in excess of 75 dBA L_{EQ} (eight-hour) beyond 50 feet from the construction activities. This is also true for other smaller equipment used during construction. Excluding a very small westernmost corner adjacent to PA 1, future residences in PA 3 would be separated from commercial and industrial areas by the width of Pankey Road. This corner creates its own setback for residences and construction noise impacts would be less than significant at the closest feasible residence. The size of equipment used for two-story (up to 35 feet) residential-only construction on finished grade pads is typically smaller and has almost no potential to exceed noise ordinance compliance at any distance. The future mixed-use development in PA 2 may potentially have commercial construction directly adjacent to a developed and occupied mixed use structure within PA 2. PA 2 is a single parcel, however, and is not covered by the normal construction noise ordinances—which protect uses on adjacent parcels. Impacts to on-site NSLUs in PA 2 from other PA 2 uses would therefore be **less than significant**.

Off-site Project Effects

The construction activity with the highest potential to impact off-site NSLUs is the mass grading. All other stages of construction would use smaller (less noisy) equipment that would not produce noise levels of 75 dBA L_{EQ} beyond a distance of 50 feet. No noise impacts due to construction-period activities on site would exceed thresholds at sensitive receptors west of I-15 or south of SR-76 due to their distance from site planning areas. There are, however, three existing residences located near the Project site that potentially could be affected by on-site construction due to their proximity the future development areas.

The residence located northeast of the Proposed Project site, east of Horse Ranch Creek Road, is over 1,800-feet from the closest on-site construction location, the residence located to the west of Horse Ranch Creek Road and north of SR-76 is over 500-feet from the closest on-site construction location, and the house located on Shearer Crossing south of SR-76 is over 400-feet from the closest on-site construction location. If a large dozer were to work for a continuous one-hour period at the closest location to the southeastern residence (400 feet away), the noise impact at that residence would be approximately 71 dBA L_{EQ}, which is under the threshold for a significant impact. More distant residences would experience commensurately lower effects as they would be located further from the noise source. Consequently, none of these houses would experience noise levels that would exceed the County's threshold of 75 dBA L_{EQ} for construction noise, and impacts would be **less than significant**.

There is a possibility that the Pankey Road bridge construction may utilize driven piles for the bridge footings. The closest off-site residence is approximately 1,000 feet from the planned bridge location. If a pile driver were to work for a continuous one-hour period at this location, the noise impact at the closest existing residence would be approximately 68.3 dBA L_{EQ}. This noise level would be below the County's threshold, and therefore **less than significant** impacts would occur.

Off-site improvements such as sewer or water pipeline placement, or roadway improvements, generally use quieter equipment than large dozers or scrapers used in mass grading. The equipment is typically located at one locale for shorter periods, and often does not operate at full power for a long duration. A backhoe, the most common piece of construction equipment used for linear utility installation, has short-term noise levels in the 70 to 85 dBA L_{EQ} range at 50 feet from the source.

The majority of proposed water mains would be 12 inches or less in diameter, although one 16-inch line would be located between Pankey Road and Horse Ranch Creek Road within SR-76 (refer to Figure 1-22). Likewise, the on-site sewer lines would all be 12 inches or less in diameter, except for one 15-inch diameter pipeline in Pankey Road between the southern Project boundary and SR-76. Smaller pipelines (12 inches or less) that are buried at shallower depth (less than five feet) rarely create significant impacts because of the types of equipment used and because the excavation and backfill moves along the length of the pipeline relatively quickly. Where larger equipment for larger lines with deep trenches could be necessary for installation of the 15-inch line within Pankey Road or 16-inch line within SR-76, the potential for excessive noise levels would exist. The closest NSLUs to the 16-inch diameter line would be the two

homes off SR-76 and Horse Ranch Creek Road. The home on SR-76 is over 250 feet north of the roadbed where the pipeline would be installed. The home on Horse Ranch Creek Road is over 125 feet east of the roadbed where the pipeline would be installed. Any distance greater than 50 feet from the equipment would attenuate excavation noise to less than significant levels. As a result, off-site construction-period noise impacts associated with utility line installation would be **less than significant**.

Construction at either of the two off-site alternative pump station locations would have the potential to expose residents west of I-15 to short-term noise. Similar to the on-site construction activities, the loudest piece of equipment involved with the construction of the pump station, regardless of the location chosen, would be an excavator. An excavator would be used to dig the trench for the pump station and would have little potential for creating noise in excess of 75 dBA L_{EQ} beyond 50 feet from the construction activities. The nearest residence to any of the off-site RWMD pump stations is approximately 70 feet away. Thus, noise impacts related to the construction of this pump station would be **less than significant**.

Although unlikely, if constructed by Campus Park West due to timing differences between the two projects, the off-site lift station proposed as part of the adjacent Campus Park project would have construction-period noise effects similar to the discussion for on-site grading and construction, Due to distance from the construction zone, none of these houses would experience noise levels that would exceed the County's threshold of 75 dBA L_{EQ} for construction noise, and impacts would be **less than significant**.

2.5.2.4 *Ground-borne Vibration/Noise*

Guidelines for Determining Significance

A significant vibration impact would occur if the Project would:

5. Subject residences to:
   a. Ongoing ground-borne vibration levels of 0.0040 inches per second (in/sec) root mean square (rms) from frequent events, or 0.010 (in/sec rms for occasional or infrequent events; and/or
   b. Ongoing ground-borne noise levels of 35 dB re micro Pascals for frequent events or 43 dB re micro Pascals for occasional or infrequent events.

6. Subject residences to vibration from isolated events (e.g., blasting) with peak particle velocity (PPV) exceeding one in/sec.

Guideline Source

The above guideline is based on the County's Guidelines for Determining Significance – Noise (January 27, 2009).

Analysis

On-site Receptors

There are no existing on-site receptors, although as noted above for construction impacts it is assumed that the mixed use residential would be completed prior to the Phase 2 grading, and that the residential uses east of Pankey Road could be completed and occupied prior to the final grading of the light industrial area north of Pala Mesa Drive.. The site consists primarily of recent or older alluvium; these deposits are assumed to be rippable. Although the entire site is underlain at depth by granite rock, this unit is not anticipated to be encountered as part of the site development process (Leighton and Associates, Incorporated 2012). Only the rough grading operation of a heavy dozer or vibratory roller, or pile driving during Project construction would have the potential to create such impacts. Due to the described alluvial nature of on-site materials, a vibratory roller would likely be used extensively to provide adequate compaction and would represent the greatest source of potential vibration impacts. A vibratory roller has a PPV of approximately 0.210 in/sec at a distance of 160 feet (as discussed in Appendix F). This would be reduced to .0831 in/sec PPV by distance attenuation only, without consideration of soil damping (i.e., the natural attenuation of vibration levels from passing through a solid medium such as soil). Based on Caltrans specifications (as outlined in Appendix F), a PPV level of 0.24 in/sec is considered "Distinctly Perceptible," while a PPV level of 0.035 in/sec is listed as "Barely Perceptible." Accordingly, the noted PPV level of 0.0831 in/sec would be slightly above the "Barely Perceptible" level, and would likely fall below this level if soil damping values were applied. Based on these considerations, potential impacts to on-site receptors from construction-related vibration would be **less than significant**.

The Project proposes multi-family residential units, where low ambient vibration is essential for interior use and sleeping conditions. The proposed residences would be located approximately 600 feet from any public road or transit right-of-way with projected noise contours of 65 dBA CNEL or more. A distance of 200 feet usually ensures that the operations do not have any chance of being impacted by ground-borne vibration or ground-borne noise levels (Harris, Miller, Miller and Hanson Inc. 1995). Accordingly, no post-construction on-site or observed off-site sources have the potential to create ground-borne vibration or low frequency (ground-borne) noise of significance, and **no impacts** to on-site uses would result.

Off-site Receptors

Due to the damping effects of soil, the vibration produced by a dozer (which would represent the greatest potential for off-site vibration impacts) is typically expected to be below 0.0040 in/sec rms at a distance of greater than 50 feet from the dozer operation. As discussed above, the closest existing residence is approximately 400 feet from the closest mass grading activities, and no closer off-site residences are planned. A pile driver has the potential to create vibration impacts at a slightly greater distance; however, at a distance of 100 feet or more from the source, vibration impacts from pile driving would be less than significant due to attenuation. Because of the distance between vibration-generating construction activities and the nearest off-site residences, any possible vibration impacts would be **less than significant**.

2.5.3 Cumulative Impact Analysis

Guideline for Determining Significance

A significant cumulative impact would occur if the Project would:

7. Considerably contribute to a cumulative scenario that would result in the exposure of any on- or off-site, existing or reasonably foreseeable future NSLU, to: (1) an increase of 10 dB (CNEL) over pre-existing noise levels of less than 50 dB CNEL resulting in a combined exterior noise level of 60 dB CNEL or greater, (2) an increase of 3 dB CNEL in existing plus project plus cumulative conditions if that total is above 60 dB CNEL, or (3) interior noise in excess of 45 dB CNEL. A "cumulatively considerable" project contribution to an identified significant cumulative noise impact would occur if the project would contribute more than a one dB increase.

Guideline Source

This guideline is based on the County's Report Format and Content Requirements – Noise (January 27, 2009).

Analysis

Project-generated noise primarily would be associated with Project-related traffic, although non-transportation noise sources are addressed in the Project Acoustical Site Assessment Report as well. The cumulative study area associated with noise identified for the Proposed Project included other projects affecting area roads also impacted by the Proposed Project (refer to Subchapter 2.6, Transportation/Traffic). The off-site cumulative traffic noise impacts associated with Project implementation in conjunction with other planned developments in the area, was calculated.

Table 2.5-4 shows the existing noise levels compared to noise levels associated with the Existing and Existing Plus Project condition, while Table 2.5-2 shows the Existing Plus Cumulative and Existing Plus Cumulative Plus Project distances to noise contour lines from the centerlines of roadways (without consideration for topography). As shown on Table 2.5-2, noise levels under Existing + Cumulative + Project conditions would exceed 60 CNEL along all modeled roadways. The change between Existing and Existing + Cumulative + Project conditions would exceed three CNEL along SR 76 from the I-15 Northbound Ramps to Rice Canyon Road, Pankey Road from SR-76 to Old Highway 395, Pala Mesa Drive from Wilt/Sage Road to Old Highway 395, and Old Highway 395 from Reche Road to Pala Mesa Drive. There are, however, no NSLUs adjacent to SR-76 or the portion of Pala Mesa Drive from Old Highway 395 to Pankey Road; therefore, no cumulative noise impacts are identified in those locations. The Project's contribution to the noise increase along the portion of Pala Mesa Drive from Wilt/Sage Road to Old Highway 395 would be 0.5 dBA and its contribution along Pankey Road from Shearer Crossing to Old Highway 395 would be 1.4 dBA; these contributions are not considered to be cumulatively considerable. The Project would result in an increase of 2.4 dBA along Pankey Road from SR-76 to Shearer Crossing. As noted above under Transportation Noise

Levels, all of the affected structures adjacent to existing roads have barriers surrounding their outdoor use areas and are appropriately oriented on their lot to provide adequate attenuation. As shown in Table 2.5-3 and detailed in Appendix F, traffic noise impact modeling conducted for these residences with outdoor use areas facing the roadway (including fences) showed that potential impacts would be **less than significant**, as cumulative noise levels (with shielding in place) would not exceed the 60 dBA CNEL threshold. The Project would result in an increase of 2.0 dBA along Old Highway 395 from Stewart Canyon Road to Pala Mesa Drive; however, as noted in Section 2.5.2.1, the noise from I-15 in this area is so substantial that noise from Old Highway 395 presents a negligible contribution to noise at this location. Based on this information, the Project **would not result in a cumulatively considerable contribution** to potential noise impacts in the area.

It should be noted that cumulative traffic noise impacts were not assessed to the proposed school off of Horse Ranch Creek Road because if the school is developed in the future, the Meadowood developer would be required to implement noise reduction measures during school development. The Meadowood project certified Final EIR accounts for the cumulative projects, including Campus Park West, in their noise analysis (County 2011) and noise attenuation has already been identified for that use. For this reason, no additional cumulatively significant noise impacts to the school related to Campus Park West implementation are expected.

In addition to the cumulative traffic effects discussed above, there is a potential for cumulative effects related to the siting of Project use areas near NSLUs both on and off site. The Project proposes mixed-use core, general commercial, limited impact industrial, and multi-family residential, uses all in proximity to one another. As noted above, potential commercial uses in the mixed-use core area might combine to have a noise impact on the residential or commercial uses include (but are not limited to) parking lots, rooftop mechanical equipment (including HVAC units), automotive shops (with compressors, impact wrenches, and dynamometers), nightclubs (with patron and music noise), and grocery stores (with refrigeration and freezer compressors). Even if each business or residence is in individual compliance with its property line noise limit, there is potential for nearby on-site uses in PAs 2 or 3 to be impacted by noise above allowable limits by the cumulative noise from all of the above sources. On-site cumulative impacts from non-transportation operational sources are therefore conservatively assessed as **potentially significant**. **(Impact N-6)**

2.5.4 Significance of Impacts Prior to Mitigation

The following significant impacts related to noise would occur with Project implementation:

Impact N-1 At buildout, Project-proposed elevated outdoor use areas (e.g., balconies) associated with multi-family residential uses in PAs 2 and 3 could experience future traffic noise levels greater than 65 dBA CNEL.

Impact N-2 At buildout, potential Project-proposed ground-level outdoor use areas associated with multi-family residential uses in PA 3 adjacent to Pankey Road would experience noise levels greater than 65 dBA CNEL from Pankey Road traffic noise sources.

Impact N-3 At on-site multi-family residences in PAs 2 and 3 where the exterior noise would be significant, interior noise levels would have the potential to exceed 45 dBA CNEL.

Impact N-4 Noise levels associated with commercial uses and ~~adjacent~~ residential HVAC units may result in exterior noise levels exceeding the associated property lines as stated in the Noise Ordinance, including abutting property lines adjacent to multi-family residential uses in PAs 2 and 3.

Impact N-5 Sheriff's station siren testing in PA 1 would have the potential to exceed the Noise Ordinance~~expose the~~ property line noise limits ~~of on-site~~for residential uses in PAs 2 and 3 and cause direct impacts from~~to~~ noise levels exceeding the one-hour average L_{EQ} sound level limits.

Impact N-6 Cumulative noise levels associated with commercial uses and adjacent residential HVAC units may result in cumulative impacts related to exterior noise levels exceeding 65 dB CNEL at nearby multi-family residential and/or commercial uses in PAs 2 and 3.

2.5.5 Mitigation

On-site Exterior Noise

M-N-1 Buildout traffic noise levels at the elevated outdoor use areas within proposed PA 2 mixed-core residential uses and PA 3 multi-family residential areas shall be mitigated to County standards of 65 dBA CNEL through the following measure:

- All elevated outdoor residential use areas in PAs 2 and 3, including decks and balconies, will require noise shielding by a 5.5-foot high noise control barrier. Required sound attenuation barriers shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be either a single layer of tongue and groove ~~and~~ (which must be at least one-inch total thickness or have a density of at least 3½ pounds per s.f.) or a double layer of overlapped fencing (shiplap) so that no seam between boards or sheets matches with a seam on the other layer. Where architectural or aesthetic factors allow, glass or clear plastic 3/8 of an inch thick or thicker may be used on the upper portion, if it is desirable to preserve a view. Sheet metal of 18-gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Any door(s) or gate(s) must be designed with overlapping closures on the bottom and sides and meet the minimum specifications of the wall materials described above. The gate(s) may be of one-inch thick or better wood, solid-sheet metal of at least 18-gauge metal, or an exterior-grade solid-core steel door with prefabricated door jambs.

- The conservative analysis indicates that a barrier is required ~~without~~ when no consideration is given to potential ~~of any~~ shielding provided by the Project buildings or additional attenuation due to distance. ~~The f~~Final building design, however, may provide substantial shielding, thus reducing the final required barrier heights necessary to provide compliance with the 65 CNEL exterior requirements. The Applicant may provide an updated acoustical analysis by a County-approved noise consultant demonstrating compliance for all required exterior outdoor use areas with the County 65 dBA CNEL requirement, completed to the satisfaction of the Director of the PDS with a lower height balcony noise control barrier.

M-N-2 Buildout traffic noise levels at the ground level outdoor uses areas within proposed PA 3 multi-family residential uses shall be mitigated to County standards of 65 dBA CNEL through the following measure:

- A 5.5-foot high sound attenuation barrier shall be sited along the eastern side of Pankey Road (excluding driveway entrances) for the length of the multi-family housing area with returns to the north and south. The wall shall follow the curved portion of the driveway entrance terminating at a location where it would run parallel to the entrance. The final barrier shall conform to the standards indentified in M-N-1, above.

On-site Interior Noise

M-N-3 An ~~final Title 24 (California Building Code)~~ exterior to interior noise control plan shall be prepared by a County-approved noise consultant for the second story or higher living areas of all multi-family homes in PAs 2 and 3 prior to obtaining building permits for the Project. Consistent with the County Noise Ordinance, the report shall confirm that interior noise levels will not exceed 45 dBA CNEL. The report shall finalize the noise requirements based on actual building design specifications, and shall be completed to the satisfaction of the Director of PDS. Noise reduction measures~~quirements~~ could include the following:

- A "windows closed" condition shall be provided that requires a means of mechanical ventilation for the second floors of all multi-family residences.
- The second floors of all multi-family residences shall be provided with weather-stripped solid-core exterior doors.
- Exterior wall/roof assemblies shall be free of cutouts and openings.
- Upgraded windows shall be provided for the second or higher floors of multi-family residences.

On-site Operational Noise

M-N-4 Potential impacts to proposed multi-family residences from commercial uses and ~~adjacent~~ residential HVAC units shall be mitigated as follows:

- A final noise study for the second story or higher living areas of all mixed use residential areas and businesses proposed in or adjacent to the mixed use areas shall be prepared during site plan and building permit approval for the mixed use portion of the Project. The report shall finalize the noise requirements based on actual building design specifications to ~~determine~~ ensure compliance with the County Ordinance limitations of 57.5 dBA between 7:00 a.m. and 10:00 p.m. and 52.5 dBA between 10:00 p.m. and 7:00 a.m. (arithmetic average of multi-family and commercial noise limits) or 65 CNEL at multi-family residential locations. ~~Preliminary e~~Exterior and interior noise reduction requirements necessary to comply with the County Noise Ordinance for residential uses~~ approval on the tentative tract map~~ shall be presented in the final noise report. ~~Additional n~~Noise control methods may include screening noise sources, relocating noise sources at a greater distance from residences and/or a combination of these measures. Implementation of noise control features would ensure compliance with County standards.

M-N-5 Siren test noise at the on-site Sheriff's station shall not exceed the following Noise Ordinance standards: 57.5 dBA between 7:00 a.m. and 10:00 p.m. and 52.5 dBA between 10:00 p.m. and 7:00 a.m. [arithmetic average of multi-family and commercial noise limits], or 65 CNEL at the property line~~.~~. These maximum noise levels shall be attained ~~be controlled~~ through site plan design~~. process using one of the following two~~ Two options are available: s~~S~~electing the location of the sheriff's station such that it is not in close proximity to the residences, and using an assumed on-site building as an intervening noise control structure; or ~~C~~constructing the parking area further away from the residences, and designating a specific siren test location. If the latter option is chosen for implementation, t~~T~~he location could be selected so that the sirens would face away from the residential structures, and a wall could be erected on both sides of the test area to further attenuate noise. A final noise study for the Sheriff's station shall be prepared during site plan approval. The report shall finalize the noise control requirements based on actual building design specifications, including identification of additional noise reducing measures as necessary to ensure compliance with County noise standards (i.e., 57.5 dBA between 7:00 a.m. and 10:00 p.m. and 52.5 dBA between 10:00 p.m. and 7:00 a.m. [arithmetic average of multi-family and commercial noise limits] or 65 CNEL at the property line between the sheriff's station and proposed multi-family residential ~~locations~~uses).

Cumulative Noise

Cumulative commercial and residential noise impacts (**Impact N-6**) in PAs 2 and 3 will be mitigated through the implementation of M-N-4.

2.5.6 Conclusion

The Proposed Project would result in significant on-site noise impacts related to traffic. Specifically, significant impacts associated with exterior noise levels would occur to receptors within the mixed-core and multi-family residential areas within PAs 2 and 3 (Impacts N-1

and N-2). Significant interior noise impacts are assessed at these on- and off-site locations as well (Impacts N-3 and N-4). Mitigation for these impacts would include a combination of site planning and construction of noise attenuation barriers along Pankey Road and Horse Ranch Creek Road, as discussed above, which would reduce exterior noise impacts to below a level of significance. The final Title 24 (California Building Code) exterior to interior noise control plan provided by a County-approved noise consultant for the second or higher floors of all multi-family residences in PAs 2 and 3 would finalize interior requirements based on actual building design specifications and would ensure that County standards are met.

Noise levels associated with commercial uses and adjacent residential HVAC units are conservatively assessed as potentially exceeding County exterior noise standards on both a direct and cumulative basis (Impacts N-4 and N-6). Mitigation for these potential impacts would include separation of the proposed commercial and multi-family areas, proper site planning, and preparation of a noise study addressing the stationary noise sources associated with adjacent uses. The noise study(s) conducted during site plan and building permit reviews would finalize noise control requirements based on actual building design specifications and would ensure that the County's standards are met.

Siren testing noise from the Sheriff station could cause potential noise impacts to nearby residential uses (Impact N-5). Mitigation for these potential impacts would include proper site planning and preparation of a noise study, including identification shielding through planned structures or construction of an area in which shielded testing would take place. The noise study during site plan review would finalize noise control requirements based on actual building design and would ensure that the County's standards are met.

Implementation of the proposed mitigation would ensure compliance with the County Noise Element standards and Noise Ordinance property line limits. The purposes of the Noise Ordinance include controlling disturbing, offensive, and excessive noise, providing an environment in which noise is not detrimental to life, health, and enjoyment of property and "securing and promoting the public health, comfort, convenience, safety, welfare, prosperity, peace and quiet of the County of San Diego and its inhabitants" (County Code Sections 36.401[b], [d], and [e]). Compliance with Noise Ordinance limits would ensure that noise generated on the Project site would fall within the dB levels specified in the ordinance. This compliance would comprise effective mitigation as the dB level standards specified in the ordinance are those generally found to be compatible with abutting sensitive receptors within the contour.

Table 2.5-1
YEAR 2030 PLUS PROJECT TRAFFIC NOISE LEVELS
AT FUTURE RESIDENTIAL RECEIVERS

Location	Receiver Number	No Soundwall	With 5 ½-foot Soundwall
Receivers East of Pankey Road	R 01	68.8 CNEL	62.5 CNEL
	R 02	68.6 CNEL	63.7 CNEL
	R 03	69.0 CNEL	62.2 CNEL
	R 04	68.2 CNEL	62.4 CNEL
	R 05	67.1 CNEL	65.0 CNEL
	R 06	66.6 CNEL	63.2 CNEL
	R 07	66.7 CNEL	63.1 CNEL
	R 08	67.5 CNEL	63.5 CNEL
	R 09	67.5 CNEL	65.1 CNEL
	R 10	67.8 CNEL	62.4 CNEL
	R 11	68.0 CNEL	61.9 CNEL
Mixed-use core Residential Receivers West of Pankey Road	R 12	67.4 CNEL	58.7 CNEL
	R 13	65.9 CNEL	59.5 CNEL
	R 14	66.0 CNEL	62.2 CNEL
	R 15	67.7 CNEL	61.5 CNEL
	R 16	67.9 CNEL	62.0 CNEL
	R 17	66.8 CNEL	59.8 CNEL
	R 18	67.1 CNEL	58.7 CNEL
	R 19	67.8 CNEL	59.9 CNEL

Source: HELIX 2013d
5.5-foot soundwall located around western edge of PA 3 for receivers east of Pankey Road
5.5-foot barriers around/on balconies for mixed-use core and multi-family residential receivers west and east of Pankey Road

Table 2.5-2
NEAR TERM CONDITIONS:
DISTANCE TO NOISE CONTOUR LINES FROM THE CENTERLINES OF ROADWAYS[1]
Existing vs. Existing + Cumulative + Project Conditions (in dBA CNEL)

Roadway/Segment	Existing Conditions	Existing + Cumulative Conditions				Existing + Cumulative + Project Conditions					
	CNEL @ 100 ft. (dBA)	CNEL @ 100 ft. (dBA)	70 CNEL (ft.)	65 CNEL (ft.)	60 CNEL (ft.)	CNEL @ 100 ft. (dBA)	Change with Project at 100 ft (dBA)	Change at 100 ft. from Existing (dBA)	70 CNEL (ft.)	65 CNEL (ft.)	60 CNEL (ft.)
I-15											
E. Mission Road to SR-76	81.6	81.9	710	1370	2480	82.2	0.3	0.6	660	1155	1875
South of SR-76	81.4	–	–	–	–	82.4	1.0	1.0	668	1152	1870
SR-76											
West of Old Highway 395	71.9	73.8	200	420	830	74.3	0.5	2.4	220	470	890
I-15 Northbound Ramps to Pankey Road	68.6	69.4	80	180	475	72.9	3.5	4.3	163	425	868
Pankey Road to Horse Ranch Creek Road	68.5	72.8	174	375	740	73.1	0.3	4.6	175	390	775
Horse Ranch Creek Road to Rice Canyon Road	68.3	72.0	140	340	670	72.3	0.3	4.0	155	366	762

Table 2.5-2 (cont.)
NEAR TERM CONDITIONS:
DISTANCE TO NOISE CONTOUR LINES FROM THE CENTERLINES OF ROADWAYS[1]
Existing vs. Existing + Cumulative + Project Conditions (in dBA CNEL)

Roadway/Segment	Existing Conditions	Existing + Cumulative Conditions				Existing + Cumulative + Project Conditions					
	CNEL @ 100 ft. (dBA)	CNEL @ 100 ft. (dBA)	70 CNEL (ft.)	65 CNEL (ft.)	60 CNEL (ft.)	CNEL @ 100 ft. (dBA)	Change with Project at 100 ft (dBA)	Change at 100 ft. from Existing (dBA)	70 CNEL (ft.)	65 CNEL (ft.)	60 CNEL (ft.)
Pankey Road											
SR-76 (Pala Road) to Shearer Crossing	54.5	58.2	IRW	24	74	60.6	2.4	6.1	IRW	34	128
Shearer Crossing to Old Highway 395	54.5	59.0	IRW	28	82	60.4	1.4	5.9	IRW	32	120
Pala Mesa Drive											
Wilt/Sage Road to Old Highway 395	50.6	64.5	IRW	82	227	65.0	0.5	14.4	13	98	245
Old Highway 395 to Pankey Road	–	58.6	IRW	24	70	62.0	3.4	-	18	55	130
Old Highway 395											
Reche Road to Stewart Canyon Road	64.7	74.1	122	280	600	72.1	-2.0	7.4	125	327	660
Stewart Canyon Road to Tecalote Drive	65.2	67.0	65	140	325	69.1	2.1	3.9	96	215	430
Tecalote Drive to Pala Mesa Drive	65.3	67.6	70	160	352	69.6	2.0	4.3	98	222	470

Source: HELIX 2013d
[1] No Topographical Consideration
– = Roadway does not exist at present
IRW = The CNEL contour indicated exists within roadway width.

Table 2.5-3
FUTURE NOISE LEVELS AT OFF-SITE NOISE SENSITIVE LAND USES
(in dBA CNEL)

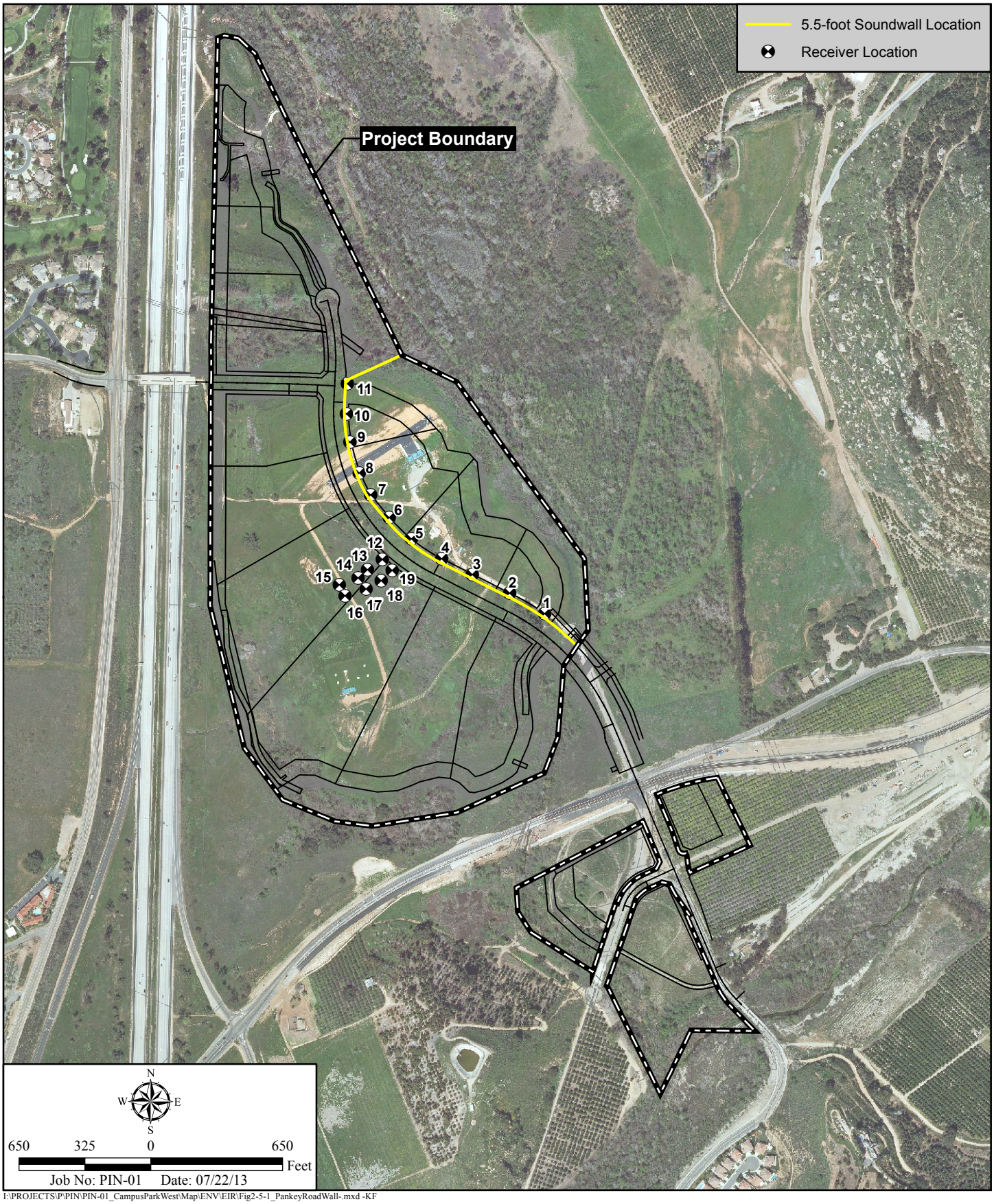
Noise Sensitive Land Use Location	Traffic Scenario					
	Existing	Existing + Project	Change with Project	Existing + Cumulative	Existing + Project + Cumulative	Change with Project
Pala Mesa Drive	47.4	52.3	4.9	59.7	60.2	0.5
Tennis Court	55.8	57.8	2.0	57.7	59.1	1.4
Dulin Residence 1	47.7	49.7	2.0	49.6	51	1.4
Dulin Residence 2	48.1	50.1	2.0	50	51.4	1.4
Dulin Residence 3	48	50	2.0	50	51.3	1.3
Dulin Residence 4	47.6	49.6	2.0	49.5	50.9	1.4
Dulin Residence 5	47.7	49.7	2.0	49.6	51	1.4
Shearer Crossing Residence (existing barrier)	50.9	52.9	2.0	52.8	54.1	1.3

Source: HELIX 2013d
All of the above residences currently have a 6 foot or higher soundwall in place, which was incorporated into the modeling. The tennis court has no attenuation barrier in place.
See Table 1-1 of Appendix F for roadway speed assumed in the noise modeling for specified NSLUs in this table.

Table 2.5-4
DIRECT PROJECT NOISE IMPACTS

Roadway	Existing Conditions				Existing + Project Conditions				
Segment	CNEL @ 100 ft. (dBA)	70 CNEL (ft.)	65 CNEL (ft.)	60 CNEL (ft.)	CNEL @ 100 ft. (dBA)	Change @ 100 ft (dBA)	70 CNEL (ft.)	65 CNEL (ft.)	60 CNEL (ft.)
I-15*									
E. Mission Road to SR-76	81.6	595	1050	1720	82.0	0.4	725	1400	2480
South of SR-76	81.4	580	1025	1690	81.8	0.4	625	1100	1175
SR-76*									
West of Old Highway 395	71.9	130	305	620	72.6	0.7	170	370	810
I-15 Northbound Ramps to Pankey Road	68.6	72	175	411	72.5	3.9	168	364	800
Pankey Road to Horse Ranch Creek Road	68.5	70	172	390	69.3	0.8	77	220	440
Horse Ranch Creek Road to Rice Canyon Road	68.3	68	168	380	69.2	0.9	75	210	430
Pankey Road									
SR-76 (Pala Road) to Shearer Crossing	54.5	IRW	9	28	58.4	3.9	7	22	69
Shearer Crossing to Old Highway 395	54.5	IRW	9	28	59.0	4.5	IRW	32	98
Pala Mesa Drive									
Wilt/Sage Road to Old Highway 395	50.6	IRW	IRW	11	57.1	6.5	IRW	23	60
Old Highway 395 to Pankey Road*	-	-	-	-	60.9	-	22	48	121
Horse Ranch Creek Road (Old Pankey Place)*									
North of SR 76 (Pala Road)	-	-	-	-	-	-	-	-	-
Old Highway 395									
Reche Road to Stewart Canyon Road	64.7	30	93	295	67.4	2.7	55	173	546
Stewart Canyon Road to Tecalote Drive	65.2	33	105	331	68.1	2.9	64	203	643
Tecalote Drive to Pala Mesa Drive	65.3	34	107	339	68.2	2.9	66	208	659

Source: HELIX 2013d
Note: Contour distances do not consider topographic variation, which could reduce noise levels relative to stated levels
- = Roadway does not exist at present
IRW = The CNEL contour indicated exists within the width of the roadway.
*No sensitive receptors; information provided for general area planning only



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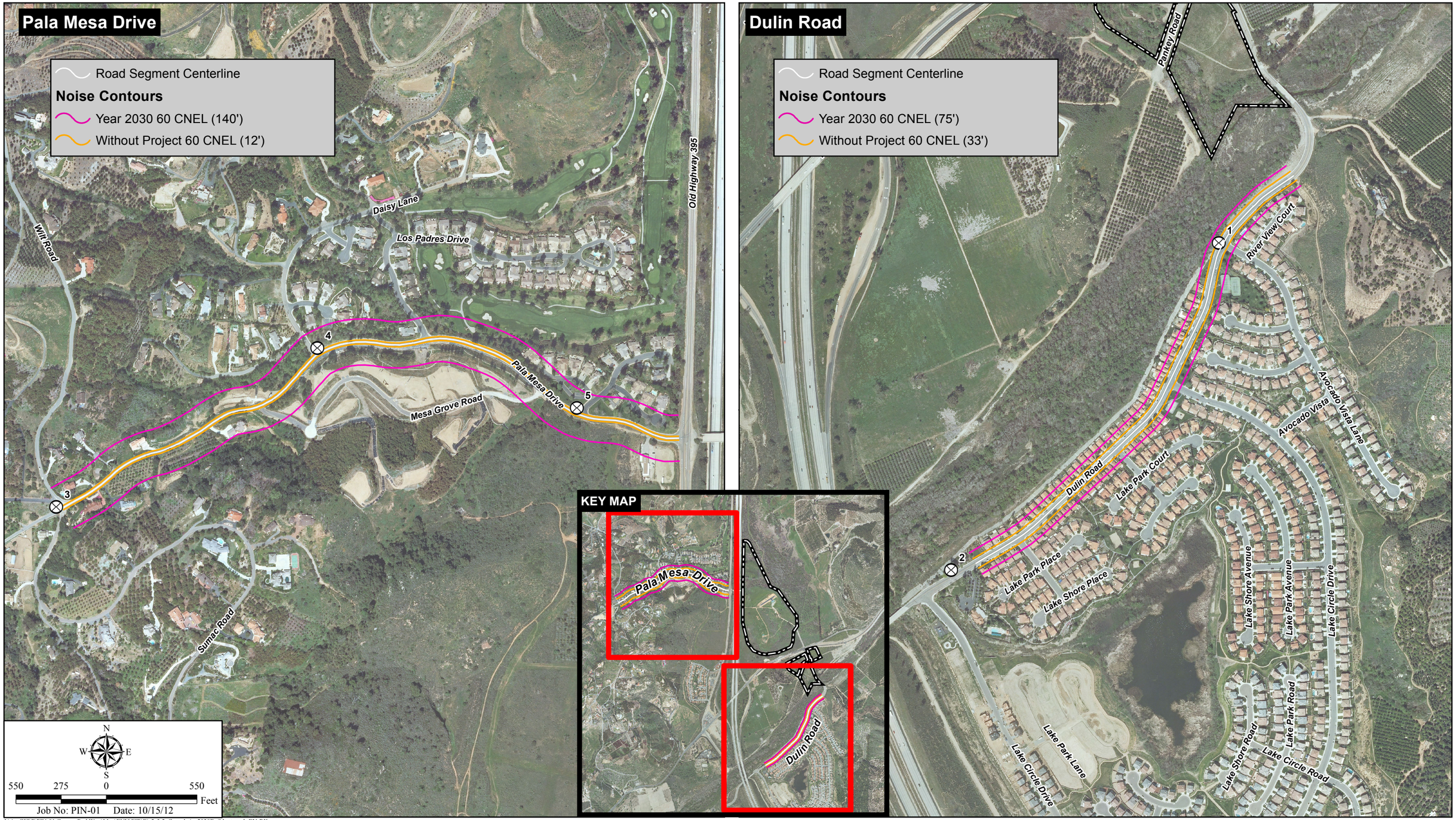
Required On-site Noise Wall Along Pankey Road

CAMPUS PARK WEST

HELIX Environmental Planning

Figure 2.5-1



I:\ArcGIS\P\PIN-01 CampusParkWest\Map\ENV\EIR\Fig2-5-2_Cumulative2030Buildout.mxd -EV, RK

Year 2030 Off-site Traffic Noise Contours

CAMPUS PARK WEST

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Figure 2.5-2

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Dulin Road Residences With Exterior Noise Control

CAMPUS PARK WEST

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Figure 2.5-3

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Pala Mesa Drive Residences With Exterior Noise Control

CAMPUS PARK WEST

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Figure 2.5-4